<table>
<thead>
<tr>
<th>Division Structure</th>
<th>60</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthropology (Anth)</td>
<td>63</td>
</tr>
<tr>
<td>Degree Requirements and Course Descriptions</td>
<td>63</td>
</tr>
<tr>
<td>Art History (ArtH)</td>
<td>65</td>
</tr>
<tr>
<td>Art, Studio (ArtS)</td>
<td>66</td>
</tr>
<tr>
<td>Biology (Biol)</td>
<td>69</td>
</tr>
<tr>
<td>Chemistry (Chem)</td>
<td>71</td>
</tr>
<tr>
<td>Computer Science (CSci)</td>
<td>73</td>
</tr>
<tr>
<td>Economics (Econ)</td>
<td>75</td>
</tr>
<tr>
<td>Education Programs</td>
<td>77</td>
</tr>
<tr>
<td>Education (Ed)</td>
<td>78</td>
</tr>
<tr>
<td>Education, Elementary (ElEd)</td>
<td>79</td>
</tr>
<tr>
<td>Education, Secondary (SeEd)</td>
<td>82</td>
</tr>
<tr>
<td>English (Engl)</td>
<td>88</td>
</tr>
<tr>
<td>European Studies (ES)</td>
<td>90</td>
</tr>
<tr>
<td>Foreign Languages and Literatures</td>
<td>93</td>
</tr>
<tr>
<td>French (Fren)</td>
<td>93</td>
</tr>
<tr>
<td>Geography (Geog)</td>
<td>95</td>
</tr>
<tr>
<td>Geology (Geol)</td>
<td>95</td>
</tr>
<tr>
<td>German (Ger)</td>
<td>97</td>
</tr>
<tr>
<td>History (Hist)</td>
<td>99</td>
</tr>
<tr>
<td>Honors Program</td>
<td>101</td>
</tr>
<tr>
<td>Humanities (Hum)</td>
<td>101</td>
</tr>
<tr>
<td>Interdisciplinary Studies (IS)</td>
<td>103</td>
</tr>
<tr>
<td>Latin American Area Studies (LAAS)</td>
<td>104</td>
</tr>
<tr>
<td>Liberal Arts for the Human Services (LAHS)</td>
<td>106</td>
</tr>
<tr>
<td>Management (Mgmt)</td>
<td>110</td>
</tr>
<tr>
<td>Mathematics (Math)</td>
<td>113</td>
</tr>
<tr>
<td>Music (Mus)</td>
<td>115</td>
</tr>
<tr>
<td>Natural Science (NSci)</td>
<td>118</td>
</tr>
<tr>
<td>Philosophy (Phil)</td>
<td>118</td>
</tr>
<tr>
<td>Physical Education and Athletics (PE)</td>
<td>120</td>
</tr>
<tr>
<td>Physical Science (PSci)</td>
<td>120</td>
</tr>
<tr>
<td>Physics (Phys)</td>
<td>120</td>
</tr>
<tr>
<td>Political Science (Pol)</td>
<td>122</td>
</tr>
<tr>
<td>Psychology (Psy)</td>
<td>125</td>
</tr>
<tr>
<td>Russian (Russ)</td>
<td>128</td>
</tr>
<tr>
<td>Secondary Education</td>
<td>128</td>
</tr>
<tr>
<td>Social Science Major</td>
<td>128</td>
</tr>
<tr>
<td>Sociology (Soc)</td>
<td>129</td>
</tr>
<tr>
<td>Spanish (Span)</td>
<td>131</td>
</tr>
<tr>
<td>Speech Communication (Spch)</td>
<td>133</td>
</tr>
<tr>
<td>Statistics (Stat)</td>
<td>135</td>
</tr>
<tr>
<td>Studio Art (ArtS)</td>
<td>136</td>
</tr>
<tr>
<td>Teacher Education Programs</td>
<td>136</td>
</tr>
<tr>
<td>Theatre Arts (Th)</td>
<td>136</td>
</tr>
<tr>
<td>Wellness and Sport Science (WSS)</td>
<td>138</td>
</tr>
<tr>
<td>Women’s Studies (WoSt)</td>
<td>141</td>
</tr>
</tbody>
</table>
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 79)Secondary Education (page 82)
Wellness and Sport Science (page 138)

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, athletic training education program, lifetime physical activity classes, coaching endorsement, and courses addressing various wellness issues are offered in the wellness and sport science discipline.

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 65)
Art, Studio (page 66)
English (page 88)
French (page 93)
German (page 97)
Humanities (page 101)
Music (page 115)
Philosophy (page 118)
Russian (page 128)
Spanish (page 131)
Speech Communication (page 133)
Theatre Arts (page 136)

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, an active student Art Club, and 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, orchestra, 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 69)
Chemistry (page 71)
Computer Science (page 73)
Geology (page 95)
Mathematics (page 113)
Natural Science (page 118)
Physics (page 120)
Statistics (page 135)

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 chemistry, physics, 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 evolutionary computation, distributive computing, and asynchronous transfer mode networks. 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 done research into the dynamics of granular materials and into the flow of heat through soils. 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 laboratories across the country. Students are encouraged to publish results of their research with faculty or to present their findings at conferences or seminars. Many students at some time serve as teaching assistants, earning money while assisting professors in tasks ranging from helping with laboratory courses to tutoring beginning students.

In geology and biology, 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 and Engineering 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.

The Science and Mathematics facilities continue to be upgraded. A new laboratory and classroom wing, now houses biology and chemistry laboratories and general purpose classrooms. The old building is being 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 75)
- Geography (page 95)
- History (page 99)
- Liberal Arts for the Human Services (page 106)
- Management (page 110)
- Political Science (page 122)
- Psychology (page 125)
- Social Science Major (page 128)
- Sociology (page 129)
- Women’s Studies (page 141)

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 90)
- Interdisciplinary Studies (page 102)
- Latin American Area Studies (page 104)

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, Liberal Arts for the Human Services, and 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).
Degree Requirements and Course Descriptions

Symbols, Abbreviations, and Punctuation—The following symbols, abbreviations, and punctuation are used throughout the course descriptions in lieu of page footnotes:

1201-1202-1203
............... A hyphen between course numbers indicates a sequence of courses that must be taken in the order listed. The first course in the sequence is a prerequisite for the second course, and the second course in the sequence is a prerequisite for the third course.

1201, 1202, 1203
............... A comma between course numbers indicates a series of courses that may be entered any semester.

Honors ... “Honors:” at the beginning of a course title indicates an Honors course.

f,s ........... Following a course number, indicates fall, spring semester.

Sci-L ...... Courses that meet specific general education requirements are designated as CE, CW, FL, M/SR, ArtP, Hist, SS, Hum, FA, Sci, Sci-L, HDiv, Env, IP, E/CR. (See page 56 for more information about general education requirements.)

cr ............ Credits per semester.

¶............. Concurrent registration is required (or allowed) in the course listed after this symbol.

# ............. Approval of the instructor is required for registration.

prereq .... Before enrolling in some courses, students must have completed or be concurrently enrolled in certain other courses, or possess some particular qualification or class standing. These requirements are known as “prerequisites” (prereq). If no prerequisites are listed, there are none for the course. A prerequisite course listed by number only (e.g., prereq 3105) is in the same discipline as the course being described.

, ............. In prerequisite listings, a comma means “and.”

∆............. Approval of the discipline offering the course is required for registration.

Anthropology (Anth)

This discipline is in the Division of the Social Sciences. The anthropology curriculum focuses on providing a comparative understanding of the range of human cultures and societies throughout the world in both humanistic and social scientific terms. Anthropology applies this understanding to problems faced by different groups of people in the flux of the modern world. Courses meet the needs of liberal arts students and students planning to pursue anthropology at the graduate level.

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, linguistics, and applied anthropology. (See Sociology for more information.)

Suggested Requirements for Area of Concentration

(See page 57 for more information on majors and areas of concentration.)

A minimum of 36 credits in anthropology and sociology, 28 of which must be in courses above the 1xxx level, including:

Anth 1111—Introductory Cultural Anthropology
Anth 2101—Physical Anthropology
Anth 3411—Seminar in Anthropological Methodology
Anth 4901—Seminar in Anthropological Theory

One course from:

Anth 4993—Directed Study
Anth 4994—Senior Honors Project

One course from:

Anth 2300—Variable Topics in Latin American Cultures and Societies
Anth 2402—American Indian Ethnography
Anth 3300—Variable Topics in Area Studies

Students should choose a faculty adviser as early as possible after declaring the area of concentration. Advisers help students select appropriate combinations of classes to fit their individual goals. Up to four credits of D may be used to meet the area of concentration requirements if offset by a sufficient number of higher grades to meet the minimum requirement of a cumulative GPA of C+ in all courses included in the area of concentration.
**Division Structure and Course Descriptions**

**Suggested Requirements for Area of Emphasis**  
*(See page 58 for more information on minors and areas of emphasis.)*  
A minimum of 24 credits in anthropology and sociology, 16 of which must be in courses above the 1xxx level, including:  
- Anth 1111—Introductory Cultural Anthropology  
- Anth 2101—Physical Anthropology  
- Anth 3411—Seminar in Anthropological Methodology

**Teacher Preparation Requirements**  
Students seeking teaching licensure in social studies 5-12 should refer to the Education, Secondary (SeEd) section of this catalog.

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

**Anth 1111s, 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 2101f. Physical Anthropology. (Sci-L; 4 cr; A-F only)**  

**Anth 2300f/s. Variable Topics in Latin American Cultures and Societies. (IP; 4 cr; repeatable when topic changes; prereq 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; prereq 1111 or Soc 1101)**  
Same as Soc 2301. The cultures, problems, and resurgence of Native Americans in the 20th century. Government policies; education, religion, self-determination, family, gaming, etc.

**Anth 3201s. Social Inequality. (Envt; 4 cr; repeatable when topic changes; prereq 1111 or Soc 1101 or #)**  
Topics in social systems, beliefs, values, and customs of societies around the world. Comparison and analysis of how various components of social, biological, and cultural systems interact with one another and with their environments.

**Anth 3202. Culture and Biology. (Envt; 4 cr; prereq 1111 or Soc 1101 or #; not offered 2002-03)**  
Examines the effect of the interaction of human groups with their extant technologies and their physical, social, and cultural environments, focusing particularly on how this interaction affects social inequality.

**Anth 2400s. Variable Topics in American Indian Cultures and Societies. (See specific topics for general education categories; 4 cr; repeatable when topic changes; prereq 1111 or Soc 1101)**  
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 2402f. American Indian Ethnography. (HDiv; 4 cr; prereq 1111 or Soc 1101; not offered 2001-02)**  
An analysis of ethnographic materials collected by and from American Indians and written by American Indian authors or with their participation.

**Anth 2403s. American Indians in the Cinema. (Hum; 4 cr; prereq 1111 or Soc 1101)**  
An analysis of the representations and misrepresentations of American Indians in the cinema, television, and common culture of the United States.

**Anth 2404. Introduction to the Peoples of North America. (HDiv; 4 cr; prereq 1111 or Soc 1101; not offered 2001-02)**  
An introduction to the societies and cultures of the peoples of North America (Canada, United States, Mexico) focusing upon the “traditional” (or pre-European contact) conditions.

**Anth 2405f. American Indian Education. (HDiv; 4 cr; prereq 1111 or Soc 1101)**  
An analysis of the history, theory, and ethnographic data related to the uses, actions, and foci of the American educational system and the interactions of various American Indian individuals and groups within that system.

**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; prereq 1111 or Soc 1101; 4 addtl cr in Anth or Soc recommended; not offered 2001-02)**  
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. (Envt; 4 cr; repeatable when topic changes; prereq 1111 or Soc 1101 or #)**  
Topics in social systems, beliefs, values, and customs of societies around the world. Comparison and analysis of how various components of social, biological, and cultural systems interact with one another and with their environments.

**Anth 3201. Social Inequality. (Envt; 4 cr; prereq 1111 or Soc 1101 or #; not offered 2002-03)**  
Examines the effect of the interaction of human groups with their extant technologies and their physical, social, and cultural environments, focusing particularly on how this interaction affects social inequality.

**Anth 3202. Culture and Biology. (Envt; 4 cr; prereq 1111 or Soc 1101 or #; not offered 2002-03)**  
Examines the interrelationships between biology and culture, using various cultures in the ethnographic record to assess the applicability of a range of biologically inspired hypotheses for aspects of human behavior and intelligence. The nature-nurture controversy.

**Anth 3300s. Variable Topics in Area Studies. (IP; 4 cr; repeatable when topic changes; prereq 1111 or Soc 1101 or #)**  
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; prereq 1111 or Soc 1101 or #)**
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; prereq 1101 or 1111 or 1121 or jr status; not offered 2001-02)
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; prereq 1101 or 1111 or 1121 or jr status; not offered 2001-02)
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; prereq 1101 or 1111 or 1121 or jr status; not offered 2001-02)
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 3131s. Northern Renaissance Art. (FA; 4 cr; prereq 1101 or 1111 or 1121 or jr status; not offered 2002-03)
Painting, sculpture, and architecture of France, Belgium, the Netherlands, and Germany during the late 14th century to the mid-16th century, tracing the development of oil painting and interpreting the significant imagery of the period.
ArtH 3141f. 15th-Century Italian Renaissance Art. (FA; 4 cr; prereq 1101 or 1111 or 1121 or jr status; not offered 2002-03)
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 3151s. High Renaissance Art. (FA; 4 cr; prereq 1101 or 1111 or 1121 or jr status; not offered 2002-03)
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 3161f. 16th-Century European Art. (FA; 4 cr; prereq 1101 or 1111 or 1121 or jr status; not offered 2002-03)
A study of art during a period of cultural upheaval and radical change in Italy and northern Europe from 1520 to 1590.

ArtH 3171s. Baroque Art. (FA; 4 cr; prereq 1101 or 1111 or 1121 or jr status; not offered 2002-03)
A sociohistorical consideration of the stylistic and thematic diversity present in the works of such 17th-century masters as Caravaggio, Bernini, Velazquez, Rembrandt, and Vermeer.

ArtH 3181f. Rococo to Revolution. (FA; 4 cr; prereq 1101 or 1111 or 1121 or jr status; not offered 2001-02)
An examination of the visual arts in relation to social and historical developments in 18th-century Europe, such as the Enlightenment, the French Revolution, archaeological discoveries, the Grand Tour, and the rise of art criticism.

ArtH 3191s. American Art to 1900. (FA; 4 cr; prereq 1101 or 1111 or 1121 or jr status; not offered 2001-02)
A thematic exploration of the role of painting, sculpture, and the decorative arts in American society, from colonial times to 1900. Topics include the landscape and Manifest Destiny, American icons, folk art, and the representation of Native Americans, African-Americans, and women.

ArtH 3201f. 19th-Century European Art through Post-Impressionism. (FA; 4 cr; prereq 1101 or 1111 or 1121 or jr status; not offered 2002-03)
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; prereq 1101 or 1111 or 1121 or jr status; not offered 2002-03)
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; prereq 1101 or 1111 or 1121 or jr status; not offered 2001-02)
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 3231f. History of Photography. (FA; 4 cr; prereq 1101 or 1111 or 1121 or jr status; not offered 2002-03)
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; prereq 1101 or 1111 or 1121 or jr status; not offered 2001-02)
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; prereq 1101 or 1111 or 1121 or jr status; not offered 2001-02)
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; prereq 1101 or 1111 or 1121 or jr status; not offered 2001-02)
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; prereq 1101 or 1111 or 1121 or jr status; not offered 2002-03)
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 3281s. Women and Art. (FA; 4 cr; prereq 1101 or 1111 or 1121 or jr status; not offered 2001-02)
A historical survey of women’s roles as creators and patrons of the visual arts in Western European and American societies, from antiquity to the present.

ArtH 4000. Variable Topics in Art History. (FA; 2-4 cr; repeatable when topic changes; prereq 1101 or 1111 or 1121 or jr status)
An art history seminar. See Class Schedule for topics.

ArtH 3993s, 4993s. Directed Study. (1-5 cr; repeatable; prereq 1101 or 1111 or 1121 or jr status, #)
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; prereq 1101 or 1111 or 1121 or jr status; 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:

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
a minimum of 6 credits of 2xxx level or above ArtS electives
a minimum of 8 additional credits in ArtH
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
Students seeking teaching licensure in visual arts K-12 should refer to the Education, Secondary (SeEd) section of this catalog.

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)
Division Structure and Course Descriptions

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

ArtS 2000. Variable Topics in Digital Art. (ArtP; 1-4 cr; repeatable when topic changes; prerequisite 1101-1106 [10 cr] or #; offered when feasible)
Explore ideas and techniques related to digital media as an art form not covered by the regular curriculum.

ArtS 2050s. Advanced Ceramics. (ArtP; 3 cr; repeatable; prerequisite 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. Assigned projects for the course may vary from semester to semester.

ArtS 2101f. Second-Year Drawing. (ArtP; 3 cr; prerequisite 1101-1106 [10 cr] or 2 sem of 1070 or #)
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; prerequisite 2101 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; prerequisite 1101-1106 [10 cr] or # for 2201 for nonmajor jrs 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; prerequisite 1101-1106 [10 cr], # for nonmajor jrs 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; prerequisite 1101-1106 [10 cr], # for 2401 for nonmajor jrs 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; repeatable; prerequisite 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 when topic changes; prerequisite 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; prerequisite 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; prerequisite 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; prerequisite 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; prerequisite 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; prerequisite 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; prerequisite 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; prerequisite 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; prerequisite sr studio art major or minor; S-N only)
Students consult with their adviser and the faculty member facilitating the exhibit for details.

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

ArtS 4994f,s. Senior Honors Project. (1-5 cr; repeatable; prerequisite 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.”

Continuing Education Courses

ArtS 1039. CE: Ceramics I. (ArtP; 3 cr; additional tuition required; course not included in UMM tuition band; subject to minimum enrollment requirement)
Exploration in personal expression through the medium of clay. Emphasis will be on handbuilding and throwing techniques using stoneware and porcelain. Other topics include clay types and their origin, decorating with slips and glazes, basic firing principles, and the role of the potter in society.

ArtS 1040. CE: Ceramics II. (ArtP; 3 cr; prerequisite 1039 or 1050; repeatable with #; additional tuition required; course not included in UMM tuition band; subject to minimum enrollment requirement)
Ceramics II is intended for any student who has taken either Ceramics I or has a working knowledge of basic forming and glazing techniques. Students will be expected to work toward higher standards of both technique and design. Assigned topics for this course may vary from semester to semester.
Arts 1500. CE: Beginning Photography. (ArtP; 3 cr; additional tuition required; course not included in UMM tuition band; subject to minimum enrollment requirement) This course is intended for the general student with little or no previous experience in artistic expression. It is an introduction to black and white photography as an art form including processes, materials, brief history, and critical skills to evaluate photographs. Students must provide their own 35 mm cameras.

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—Freshman Seminar in Biological Principles
Biol 2101—Evolution of Biodiversity
Biol 2111—Cell Biology
Biol 3101—Genetics
Biol 3121—Molecular Biology
Biol 3131—Ecology
Biol 3701—Biological Communications
Biol 4901—Senior Seminar
Chem 1101—General Chemistry I
Chem 1102—General Chemistry II
or Chem—1102H Honors: General Chemistry 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
Stat 1601—Introduction to Statistics
or Stat 2601—Statistical Methods
at least 12 additional credits from:
Biol numbered 4000-4500
or at least 8 credits from Biol numbered 4000-4500 plus one course from:
Psy 3211—Biological Psychology
or 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 3701—Biological Communication

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—Freshman Seminar in Biological Principles
Biol 2101—Evolution of Biodiversity
Biol 2111—Cell Biology

Two additional Biol courses numbered 3000-4500 or one additional Biol course numbered 3000-4500 plus either:
Psy 3211—Biological Psychology
or Psy 3201—Comparative Psychology
or Geol 3111—Introduction to Invertebrate Paleontology

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 seeking teaching licensure in life science 5-12 should refer to the Education, Secondary (SeEd) section of this catalog.

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 biology 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 cr for biol majors or minors; offered even-numbered yrs) 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. Freshman Seminar in Biological Principles. (Sci; 3 cr; prereq biol major/minor or #) 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. (two 65-min lect and discussion)

Biol 2101s. Evolution of Biodiversity. (Sci-L; 4 cr; prereq 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; prereq 1101, Chem 1102 or Chem 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; prereq 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 3121s. Molecular Biology. (Sci-L; 5 cr; 3500 recommended; prereq 1101, 2111, 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; 3200 recommended; prereq 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 3701f,s. Biological Communications. (1 cr; prereq 2101, 2111, #) Preparation of an extensive literature review paper on a biological topic of the student’s choice.

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; prereq 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; 3200, 3500 recommended; prereq 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; prereq 2101; offered odd-numbered yrs) 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 180-min lab and field studies)

Biol 4131f. Vertebrate Natural History. (Sci-L; 4 cr; prereq 2101; offered odd-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; prereq 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; prereq 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; 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; 3200 recommended; prereq 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 4181f. Developmental Biology. (Sci-L; 4 cr; prereq 2111, 3101 recommended; offered even-numbered yrs) Survey of general concepts in developmental biology, emphasizing molecular mechanisms of positional information, pattern formation, and cellular interactions. Stresses comparative aspects of developmental processes, and the role of development in evolution. (two 65-min lectures, one 180-min lab)
Biol 4191f. Freshwater Biology. (Sci-L; 4 cr; prereq 2101, 2111 or #; offered even-numbered yrs)
Structure, function, and biota of freshwater ecosystems, including lakes, streams and wetlands. Lab emphasizes independent research and field study in local habitats. (two 65-min lect, one 180-min lab; weekend field trip required)

Biol 4211f. Biochemistry. (Sci; 4 cr; prereq 1101, 2111, Chem 2302 or #)
Structures, functions, and biochemical transformations of proteins, carbohydrates, nucleic acids, and lipids. (three 65-min lect)

Biol 4301. Plant Biology. (Sci-L; 4 cr; prereq 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; Math 1150 or Math 3605 recommended; prereq 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; prereq 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 D; 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 4611f. Biochemistry Lab. (1 cr; prereq 4211 or ¶4211)
Experiments using the major separation and analytical techniques of biochemistry, including centrifugation, chromatography, electrophoresis, and spectrophotometry.

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 4993s,. Directed Study. (1-5 cr; repeatable; prereq D)

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—General Chemistry I
Chem 1102—General Chemistry II
or Chem 1102H—Honors: General Chemistry 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
Division Structure and Course Descriptions

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 3801—History of Chemistry
Chem 3811—Macromolecules
or another course numbered 43xx-47xx

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.

Students interested in biochemistry can design an area of concentration in consultation with the chemistry faculty. It is suggested that coursework include:
Chem 1101—General Chemistry I
Chem 1102—General Chemistry II (or honors section)
Biol 1101—Freshman Seminar in Biological Principles
Biol 2111—Cell Biology
Chem 2301—Organic Chemistry I
Chem 2311—Organic Chemistry I Lab
Chem 2302—Organic Chemistry II
Chem 2321—Introduction to Research
Biol 3101—Genetics (with lab)
Biol 3121—Molecular Biology (with lab)
Biol 4211—Biochemistry
Biol 4611—Biochemistry Lab
Chem 3101—Analytical Chemistry
Chem 3501—Physical Chemistry I
Chem 4351—Bioorganic Chemistry

In addition, supporting coursework in physics and calculus is required.

Additional electives in chemistry and biology are also required. Supporting courses must be approved by the chemistry faculty.

Minor Requirements
Chem 1101—General Chemistry I
Chem 1102—General Chemistry II
or Chem 1102H—Honors: General Chemistry 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
Students seeking teaching licensure in chemistry 5-12 should refer to the Education, Secondary (SeEd) section of this catalog.

Course Descriptions

Chem 1101f. General Chemistry I. (Sci-L; 4 cr; prereq 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; prereq 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 1102Hs. Honors: General Chemistry II. (Sci-L; 4 cr; prereq 1101, # for students not in Honors Program)
Continuation of Chem 1101. 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; 4 cr; prereq 1102 or 1102H)
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; prereq 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; prereq 2301)
Development of lab techniques in organic chemistry; experimental problem solving. (3 hrs lab)
Chem 2312s. Organic Chemistry Lab II. (1 cr; prereq 2311) Experiments in organic chemistry; synthesis and experimental design; spectral analysis. (3 hrs lab)

Chem 2321s. Introduction to Research. (Sci-L; 2 cr; prereq 2302) 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; prereq 1102 or 1102H) The application of chemical equilibria to chemical analysis with emphasis on the fundamental quantitative aspects of analytical chemistry. Acid-base, oxidation-reduction, and complexometric titrations, introduction to electrochemical and spectrophotometric analyses. (3 hrs lect, 3 hrs lab)

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


Chem 3502s. Physical Chemistry II. (Sci; 4 cr; prereq 3501) Introduction to quantum theory. Atomic and molecular structure. Group theory. Introduction to statistical mechanics. Chemical dynamics. Topics drawn from the liquid and solid states, advanced kinetics, electrochemistry, and surfaces. (4 hrs lect)

Chem 3511s. Physical Chemistry Lab. (1 cr; prereq ¶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; 4 cr; prereq 3501) The periodic table; models of structure and bonding of main group elements and transition metals, nomenclature, symmetry, and bonding theory of coordination compounds. (4 hrs lect)


Chem 4351s. Bioorganic Chemistry. (Sci; 4 cr; prereq 2302, Biol 3111) The organic chemistry of biological systems. Includes the chemistry of amino acids, polypeptides, polynucleotides, phosphate groups, and coenzymes, as well as the study of enzymatic catalysis and the elucidation of biosynthetic pathways. (4 hrs lect)

Chem 4352f. Synthesis. (Sci; 4 cr; prereq 2302) Study of the preparation of biologically active molecules, emphasizing the application of transition metal chemistry to modern synthetic methods. (4 hrs lect)

Chem 4551f. Theoretical Chemistry. (Sci; 4 cr; prereq 3502 or #; not offered 2002-03) Quantum theory of molecules. Statistical thermodynamics; Gibbsian ensembles; applications. (4 hrs lect)

Chem 4552s. Molecular Spectroscopy. (Sci; 4 cr; prereq 2311, 3101 or #) Interaction of molecules and electromagnetic radiation. Spectroscopic determination of molecular structure. Operation of spectrometers and spectrophotometers. (4 hrs lect)

Chem 4751. Advanced Inorganic Chemistry. (Sci; 4 cr; prereq 3701 or #) Structure and reactions of coordination compounds, inorganic cages and clusters, lanthanide and actinide series. (4 hrs lect)

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; prereq 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; prereq 4901; S-N only) Continuation of Chemistry Seminar I.

Chem 1993f,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.
Division Structure and Course Descriptions

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 3902—Seminar I

CSci 3903—Seminar II or equivalent experience approved by the discipline.

14 credits of electives. Elective credits must meet a distribution requirement of at least 4 credits in each area. For current and recent topic offerings see <www.mrs.umn.edu/academic/csci>.

in addition, majors must complete 12 credits of appropriate Math or Stat courses numbered 1101 and above (not to include Stat 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 or Stat 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 1211. Introduction to Problem Solving with Java. (M/SR; 4 cr; prereq Math 1101)

Problem solving and algorithm design using object-oriented programming techniques. Introduction to the Java programming language and its use in implementing algorithms to solve scientific problems. Testing and debugging of software with emphasis on the complexity of modern software systems.

CSci 1301. Problem Solving and Algorithm Development I. (M/SR; 4 cr)

Introduction to different problem solving approaches and major programming paradigms. Study of the functional programming paradigm, concentrating on recursion and inductively-defined data structures. Simple searching and sorting algorithms.

CSci 1302. Problem Solving and Algorithm Development II. (M/SR; 4 cr; prereq 1301)

Basic proof techniques, including logic, set theory, induction and variants, program correctness proofs, and simple Big-Oh analysis of algorithms. Further study of functional programming and an introduction to object-oriented programming.

CSci 2101. Data Structures. (M/SR; 4 cr; prereq 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; prereq 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; prereq 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; prereq 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 3902. Seminar I. (1 cr; prereq 2101, concurrent registration for 3903 recommended; S-N only)

Familiarizes students with literature in the field, focusing on ethical issues in computing. Discussion and group work. Students analyze various articles or similarly published works, synthesize their contents, make formal presentations, and attend and evaluate the presentations of their peers.

CSci 3903. Seminar II. (1 cr; prereq 3902, concurrent registration for 3902 recommended; S-N only)

In-depth survey of literature in a specific computer-related field of the student’s choice. Students analyze various articles or similarly published works, synthesize their contents, and present their work formally in a conference setting. Multiple writing and speaking experiences reviewed by faculty and classmates.

CSci 4400. Variable Topics in Computing Systems. (M/SR; 2 cr; repeatable when topic changes; prereq 3401, 3903 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; prereq 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.

CSci 4500. Variable Topics in Theory. (M/SR; 2 cr; repeatable when topic changes; prereq 3501, #3903 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; prereq 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 and Languages. (M/SR; 2 cr; repeatable when topic changes; prereq 3601; #3903 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 and Languages. (M/SR; 4 cr; repeatable when topic changes; prereq 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 4993f,s. Directed Study. (1-5 cr; repeatable; prereq #)
CSci 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.”

**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 1111—Principles of Microeconomics
Econ 1112—Principles of Macroeconomics
Econ 3201—Microeconomic Theory
Econ 3202—Macroeconomic Theory
Econ 3501—Introduction to Econometrics
Econ 4900—Variable Topics in Economic Research
Math 1101—Calculus I
Stat 1601—Introduction to Statistics

or Stat 2601—Statistical Methods

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

No more than 4 credits from each of the following can be applied to the major.

Econ x993—Directed Study
Econ 490x—Variable Topics in Economic Research

**Grades of D in Econ 1111-1112, Math 1101, and Stat 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.**

**Students should complete the following during their first two years:**

Econ 1111—Principles of Microeconomics
Econ 1112—Principles of Macroeconomics
Math 1101—Calculus I
Stat 1601—Introduction to Statistics

or Stat 2601—Statistical Methods

**Students should complete the following before their senior year:**

Econ 3201—Microeconomic Theory
Econ 3202—Macroeconomic Theory
Econ 3501—Introduction to Econometrics

**Minor Requirements**

Econ 1111—Principles of Microeconomics
Econ 1112—Principles of Macroeconomics
Econ 3201—Microeconomic Theory
Econ 3202—Macroeconomic Theory
Math 1101—Calculus I
Stat 1601—Introduction to Statistics

6 additional credits in Econ courses at the 3xxx level or above
Division Structure and Course Descriptions

No more than 4 credits from each of the following can be applied to the minor.

Econ x993—Directed Study
Econ 490x—Variable Topics in Economic Research

Grades of D in Econ 1111-1112, Math 1101, and Stat 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 social studies 5-12 should refer to the Education, Secondary (SeEd) section of this catalog.

Course Descriptions

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Description</th>
<th>Prerequisites</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Econ 1111f,s</td>
<td>Principles of Microeconomics</td>
<td>Study of scarce resource allocation in a market economy. Supply and demand, consumer theory, theory of the firm, market structure, pricing of factors of production, income distribution and the role of government.</td>
<td>(SS; 4 cr; prereq high school algebra or #)</td>
<td>Econ 1112 or #; not offered 2001-02</td>
</tr>
<tr>
<td>Econ 1112f,s</td>
<td>Principles of Macroeconomics</td>
<td>Introduction to basic economic problems, concepts, and theoretical models. Measurement of economic performance: national income, inflation and unemployment; competing macroeconomic theories and stabilizing policies.</td>
<td>(SS; 4 cr; prereq high school algebra or #)</td>
<td>Econ 1112 or #; not offered 2002-2003</td>
</tr>
<tr>
<td>Econ 1951f,s</td>
<td>Seminar for Social Science Majors</td>
<td>Familiarization with various journals, periodicals, and sources of statistical information that deal with current developments in economics.</td>
<td>(1 cr; prereq 1111, 1112; no cr for students who are concurrently enrolled in or have received cr for 3xxx Econ courses; S-N only)</td>
<td>Econ 1951f,s of this catalog.</td>
</tr>
<tr>
<td>Econ 3000</td>
<td>Variable Topics in Economics</td>
<td>Specific topics for general education categories; 2-4 cr; repeatable when topic changes; (SS; 4 cr; prereq 1111, 1112 or #; offered when feasible)</td>
<td>Topic to be announced.</td>
<td>Econ 3000f,s of this catalog.</td>
</tr>
<tr>
<td>Econ 3002</td>
<td>Urban and Regional Economics II</td>
<td>Study of economic issues that arise in a metropolitan setting. Includes the economics of crime, transportation, urban sprawl, pollution, city government, and education.</td>
<td>(SS; 2 cr; prereq 1101 or #)</td>
<td>Econ 3002 of this catalog.</td>
</tr>
<tr>
<td>Econ 3113f</td>
<td>Money, Banking and Financial Markets</td>
<td>Nature and function of money; role of commercial banks and other financial institutions; structure and function of Federal Reserve system; monetary policies for stabilization and growth; and a survey and synthesis of major theories on the value of money.</td>
<td>(SS; 4 cr; prereq 1111, 1112 or #)</td>
<td>Econ 3113f of this catalog.</td>
</tr>
<tr>
<td>Econ 3121s</td>
<td>Public Economics I</td>
<td>Analysis of the economics of public expenditures.</td>
<td>(SS; 2 cr; prereq 1111, 1112 or #; not offered 2001-02)</td>
<td>Econ 3121s of this catalog.</td>
</tr>
<tr>
<td>Econ 3122s</td>
<td>Public Economics II</td>
<td>Analysis of the economics of taxation.</td>
<td>(SS; 2 cr; prereq 1111, 1112 or #; not offered 2001-02)</td>
<td>Econ 3122s of this catalog.</td>
</tr>
<tr>
<td>Econ 3131s</td>
<td>Comparative Economic Systems</td>
<td>Comparison of the theory and functioning of the major economic systems of the world; economic reform in capitalist and socialist economies.</td>
<td>(IP; 2 cr; prereq 1111, 1112 or #; for students not in Honors Program; not offered 2002-2003)</td>
<td>Econ 3131s of this catalog.</td>
</tr>
<tr>
<td>Econ 3141f</td>
<td>Economic Development and Growth I</td>
<td>Nature and meaning of economic development. Theories of economic growth and the historical experience of newly developed countries. General development problems facing developing countries.</td>
<td>(IP; 2 cr; prereq 3141 or #)</td>
<td>Econ 3141f of this catalog.</td>
</tr>
<tr>
<td>Econ 3142f</td>
<td>Economic Development and Growth II</td>
<td>Current development problems and policies in developing countries; the possibilities and prospects for future development. Case studies examining the development progress of these countries.</td>
<td>(IP; 2 cr; prereq 3141 or #)</td>
<td>Econ 3142f of this catalog.</td>
</tr>
<tr>
<td>Econ 3141s</td>
<td>Honors: Comparative Economic Systems</td>
<td>Same as Econ 3131. Comparison of the theory and functioning of the major economic systems of the world; economic reform in capitalist and socialist economies.</td>
<td>(IP; 2 cr; prereq 1111, 1112 or #; for students not in Honors Program; not offered 2002-2003)</td>
<td>Econ 3141s of this catalog.</td>
</tr>
<tr>
<td>Econ 3141s</td>
<td>Introduction to Econometrics</td>
<td>Designing empirical models in economics. Simple and multiple regression analysis. Violations of classical assumptions in regression analysis. Logit and probit models; simultaneous equation models and lag models. Emphasis on application techniques to economic issues.</td>
<td>(M/SR; 4 cr; prereq 3201 or 3202, Stat 1601)</td>
<td>Econ 3141s of this catalog.</td>
</tr>
</tbody>
</table>
Econ 4101f. Labor Economics I. (HDiv; 2 cr; prereq 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; prereq 3201 or #) Functioning and performance of the labor market. Heterodox explanations of labor market behavior. Labor demand applications.

Econ 4111. Mathematical Economics I. (M/SR; 2 cr; prereq 3201, 3202 or #; offered when feasible) Application of mathematical methods to economic analysis. Mathematical formulations and solution of optimizing models pertaining to households and firms and of adjustments to disturbances.

Econ 4112. Mathematical Economics II. (M/SR; 2 cr; prereq 3201, 3202 or #; offered when feasible) Topics include linear modeling, input-output analysis and linear programming, efficiency and exchange, comparative static analysis, and dynamic microeconomic and macroeconomic models.

Econ 4121s. International Trade Theory. (SS; 2 cr; prereq 3201 or #; not offered 2002-03) 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 4121Hs. Honors: International Trade Theory. (SS; 2 cr; prereq 3201 or #; # for students not in Honors Program; not offered 2002-03) 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; prereq 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 4131Hs. Honors: International Finance. (SS; 2 cr; prereq 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; prereq 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. (SS; 2 cr; prereq 3201, 3202 or #)

Econ 4902s. Development Economics. (IP; 2 cr; prereq 3201, 3202 or #)

Econ 4903s. International Economics. (SS; 2 cr; prereq 3201, 3202 or #)

Econ 4904f. Public Economics. (SS; 2 cr; prereq 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.”

Education Programs

(See Education [Ed]; Education, Elementary [ElEd]; Education, Secondary [SeEd]; and Wellness and Sport Science [WSS].)

UMM offers all students the opportunity to study education and its role in society. Courses with the “Ed” designator meet general education requirements, and enrollment in these courses is open and not limited to students pursuing teaching licensure.

The Division of Education offers a major and teaching licensure in elementary education (K-6) with specialty licensures in preprimary, middle level communication arts and literature, middle level mathematics, middle level science, and middle level social studies. Licensure of secondary school teachers is offered in business (5-12), chemistry (5-12), communication arts and literature (5-12), earth and space science (5-12), French (K-12), German (K-12), instrumental music (K-12), life science (5-12), mathematics (5-12), physics (5-12), social studies (5-12), Spanish (K-12), visual arts (K-12), and vocal music (K-12). Students may elect to complete coursework leading to endorsement for head varsity coaches in Minnesota.

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 ensure 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; 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 catalog. 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 3101Hf. Honors: Ethics and Decision Making in Education I.** (1-4 cr; prereq 3101H, # 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 3102Hs. Honors: Ethics and Decision Making in Education II.** (1-4 cr; prereq 3101H, # 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.”

**Continuing Education Courses**

**Ed 1011. CE: Beginning Sign Language I.** (FL; 3 cr; prereq #; additional tuition required; course not included in UMM tuition band; subject to minimum enrollment requirement) Students develop a working vocabulary of conceptually based signs. Emphasis is on receptive abilities. Students develop an awareness of the history of sign language and explore various signing systems and their most common uses.

**Ed 1012. CE: Beginning Sign Language II.** (FL; 3 cr; prereq 1011; additional tuition required; course not included in UMM tuition band; subject to minimum enrollment requirement) Students develop a working vocabulary of conceptually based signs. Emphasis is on expressive abilities. Students develop an awareness of the history of sign language and deaf culture and explore various signing systems and their most common uses. A performance of the student’s signing skills is evaluated.

**Ed 1111. CE: Introduction to Deaf Education.** (Hum; 2 cr; additional tuition required; course not included in UMM tuition band; subject to minimum enrollment requirement) Designed to give students a basic understanding of how to educate the deaf. Emphasis is on learning about their language and culture and how to use that knowledge in working with the deaf in the classroom setting.

**Ed 2011. CE: Intermediate Sign Language I.** (FL; 3 cr; prereq 1012 or #; additional tuition required; course not included in UMM tuition band; subject to minimum enrollment requirement)
Students develop a working vocabulary of conceptually based signs. Emphasis is on receptive as well as expressive abilities. Students continue to develop an awareness of the history of sign language and deaf culture and explore various signing systems and their most common uses. A performance of the student’s signing skills is evaluated.

**Ed 2012. CE: Intermediate Sign Language II.** (FL; 3 cr; prereq 2011; additional tuition required; course not included in UMM tuition band; subject to minimum enrollment requirement)

Students develop a working vocabulary of conceptually based signs. Students interact with members of the deaf community and participate in field trips. Students help educate the campus and surrounding communities about deaf people and their culture by presenting a performance at the end of the semester.

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**Education, Elementary (ElEd)**

This discipline is in the Division of Education. A separate admissions process must be completed and admission granted before students can enroll in this program.

The elementary education major leads to Minnesota licensure as a teacher of grades K through 6. Students obtaining a K-6 license must also be licensed in a specialty area. The five areas offered at UMM are 1) preprimary, 2) middle level communication arts and literature, 3) middle level mathematics, 4) middle level science, and 5) middle level social studies.

**Objectives**—Coursework leading to a degree in elementary 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 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.

Students planning to seek Minnesota teaching licensure at the elementary K-6 level and specialty areas must have completed licensure requirements in the elementary teacher education program, and state and federally mandated examinations for new teachers. A minimum GPA of 2.50 overall and in required licensure area(s) and education courses is required. All courses required for teaching licensure in elementary education (discipline, professional education, or other courses) must be completed with a grade of C- or higher.

**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:
   For students desiring more in-depth alternatives, Psy 1101 and 1102—Foundations of Psychology I and II, respectively, may be substituted for the Psy 1051 prerequisite, and both Psy 3401—Developmental Psychology I: Child Psychology and Psy 3402—Developmental Psychology II: Adolescence may be substituted for Psy 1061—Introduction to the Development of the Child and Adolescent.
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 Pre-professional 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.
Division Structure and Course Descriptions

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. A passing score on the Minnesota Board of Teaching Pre-professional Skills Test (PPST)
6. Approval of teacher education faculty

Major Requirements
Students must complete:
Psy 1051—Introduction to Psychology
Psy 1061—Introduction to the Development of the Child and Adolescent
Ed 2101—Foundations and Issues in Education
EIEd 3101—Teaching and Learning Strategies
EIEd 3102—Reading in the Elementary School
EIEd 3103—Mathematics in the Elementary School
EIEd 3111—Practicum I: Field Experience in the Elementary Classroom
EIEd 3201—Preprimary Theory and Pedagogy
or EIEd 3202—Middle Level Theory
EIEd 3211—Practicum II: Field Experience in a Preprimary Setting
or EIEd 3212—Practicum II: Field Experience in a Middle Level Setting
EIEd 4101—Special Education
EIEd 4102—Social Studies in the Elementary School
EIEd 4103—Science in the Elementary School
EIEd 4104—Language Arts and Literature in the Elementary School
EIEd 4107—Health and Physical Education in the Elementary School
EIEd 4111—Practicum III: Beginning Student Teaching
EIEd 4112—Practicum IV: Experience in the Elementary School Classroom
EIEd 4201—Directed Student Teaching in Primary and Intermediate Grades or EIEd 4204—Directed Student Teaching in Intermediate School at the Primary and Intermediate Level
EIEd 4901—The Teacher and Professional Development.

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. Communication arts and literature: general education requirements for college writing and foreign language; speech any 1xxx level or above (Spch 1000 or 1051 recommended); English any 2xxx level or above (Engl 3021 recommended)
3. Statistics: Stat 1601, 2601, or 2611 and one mathematics course numbered 1xxx or above (or CLEP equivalency)
4. Visual and performing arts: (two courses representing two different disciplines) studio arts (ArtS 1050 or 1070 recommended), music (Mus 1041 or 1042 recommended), theatre (Th 1101 or 2111 recommended), or dance
5. Social studies: (two courses representing two different disciplines) anthropology (Anth 1111 recommended), economics (Econ 1101 recommended), political science (Pol 1201 recommended), history (Hist 1301 recommended), sociology (Soc 1101 recommended), geography (Geog 1001 or 3111 recommended)
6. Science: (two courses representing two different disciplines, 1 with lab) physics, geology, biology, chemistry
7. Psy 1081—Drugs and Human Behavior
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 positive recommendation from the discipline and Division of Education
11. Passing scores on state and federally mandated examinations for new teachers

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.

Requirements for Specialty Areas

Students seeking K-6 licensure must also obtain a specialty licensure in one of the following five areas:

1. Preprimary education (age 3 to grade 3): Psy 1051 (or both Psy 1101 and 1102); choose 3 additional courses from Psy 3301, Psy 3311, Psy 3401, Psy 3501, Soc 1101, Soc 3402 or Th 2111; ElEd 3201—Preprimary Theory and Pedagogy; and ElEd 3211—Practicum II: Field Experience in a Preprimary Setting

2. Middle level communication arts and literature: any Spch course 1xxx level or above; two Engl courses 1xxx level or above (not College Writing); one Engl course 2xxx level or above (Engl 3021 recommended); ElEd 3202—Middle Level Theory; ElEd 3212—Practicum II: Field Experience in a Middle Level Setting; and EngE 4102—Methods of Teaching Communication Arts and Literature in the Middle School

3. Middle level mathematics: Stat 1601, 2601, or 2611; three additional math courses at the 1xxx level or above; ElEd 3202—Middle Level Theory; ElEd 3212—Practicum II: Field Experience in a Middle Level Setting; and MthE 4102—Methods of Teaching Mathematics in the Middle School

4. Middle level social studies: Hist any 1xxx level or above; Anth any 1xxx level or above; two courses representing two different disciplines (Geog, Econ, Pol, or Soc); ElEd 3202—Middle Level Theory; ElEd 3212—Practicum II: Field Experience in a Middle Level Setting; and SScE 4102—Methods of Teaching Social Studies in the Middle School

5. Middle level science: Biol any 1xxx level or above; Geol any 1xxx level or above; Chem any 1xxx level or above; Phys any 1xxx level or above; ElEd 3202—Middle Level Theory; ElEd 3212—Practicum II: Field Experience in a Middle Level Setting; and SciE 4102—Methods of Teaching Science in the Middle School

It is recommended that students complete additional coursework, a minor, or a second major supportive of their chosen specialty licensure area. Students seeking a non-education major or minor should consult the catalog for requirements in the area of interest.

Course Descriptions


ElEd 3101H. Honors: Teaching and Learning Strategies. (4 cr; prereq admission to the elementary teacher education program, # for students not in Honors Program) Elementary school teaching and learning. Planning for instruction, learning theory, multicultural education, classroom management, use of technology in the classroom.

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. (3 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 3111f. Practicum I: Field Experience in the Elementary Classroom. (1 cr; prereq admission to the elementary teacher education program; S-N only) Field experience in the elementary classroom.

ElEd 3201s. Preprimary Theory and Pedagogy. (3 cr; prereq 3101, 3102, 3103, 3111) Developmental characteristics, organizational and instructional needs of preprimary and early elementary classrooms. Characteristics of effective preprimary and early elementary teachers. Required for student pursuing an elementary preprimary and early elementary specialty.

ElEd 3202s. Middle Level Theory. (2 cr; prereq 3101, 3102, 3103, 3111) Developmental characteristics, organizational and instructional needs of pre-adolescent and adolescent level classrooms. Characteristics of effective middle level teachers. Required for student pursuing an elementary middle level specialty.

ElEd 3211s. Practicum II: Field Experience in a Preprimary Setting. (1 cr; prereq 3101, 3102, 3103, 3111; S-N only) Field experience in preprimary and early primary settings.

ElEd 3212s. Practicum II: Field Experience in a Middle Level Setting. (1 cr; prereq 3101, 3102, 3103, 3111; S-N only) Field experience in the middle level classroom.

ElEd 4101f. Special Education. (2 cr; prereq 3101, 3102, 3103, 3111) Strategies associated with special needs students.
**Division Structure and Course Descriptions**

Eied 4102f. Social Studies in the Elementary School. (2 cr; prereq 3101, 3102, 3103, 3111)
Outcomes, content, integration strategies, and assessment of social studies instruction in the elementary curriculum.

Eied 4103f. Science in the Elementary School. (2 cr; prereq 3101, 3102, 3103, 3111)
Standards, curriculum, and assessment of elementary school science. 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.

Eied 4104f. Language Arts and Literature in the Elementary School. (3 cr; prereq 3101, 3102, 3103, 3111)
Outcomes, content, strategies, and assessment of language arts and children’s literature in the elementary classroom.

Eied 4107f. Health and Physical Education in the Elementary School. (1 cr; prereq 3101, 3102, 3103, 3111)
Scope, sequence, and related activities in elementary health and physical education.

Eied 4111f. Practicum Ill: Beginning Student Teaching. (2 cr; prereq 3101, 3102, 3103, 3111; S-N only)
Participation in in-service, teaching, and teaching-related activities in preparation for student teaching.

Eied 4112f. Practicum IV: Experience in the Elementary School. (1 cr; prereq 3101, 3102, 3103, 3111; S-N only)
Field experience in the elementary classroom.

Eied 4201s. Directed Student Teaching in Primary and Intermediate Grades. (HDiv; 10 cr; prereq 4101, 4102, 4103, 4104, 4111, 4112; 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 4202f, s. Directed Student Teaching in Primary and Intermediate Grades. (1-16 cr; prereq #: S-N only)
For students who need alternative or additional student teaching experience. Students demonstrate application of approaches to teaching and learning in primary and intermediate grades under guidance of a cooperating teacher and University supervisor.

Eied 4204s. Directed Student Teaching in International School at the Primary and Intermediate Level. (IP; 10 cr; prereq 4101, 4102, 4103, 4104, 4111, 4112; 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; prereq 4201, 4204 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. A separate admissions process must be completed and admission granted before students can enroll in this program.

The secondary education program leads to Minnesota licensure as a teacher of grades K through 12 and 5 through 12 in specified liberal arts disciplines.

**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 middle and 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.

Students seeking licensure must have a major, a bachelor’s degree, and have completed licensure requirements in the area(s) in which licensure is sought. UMM is approved to recommend teaching licensure in the following fields: business (5-12), chemistry (5-12), communication arts and literature (5-12), dance and theatre arts (K-12), earth and space science (5-12), French (K-12), German (K-12), instrumental music (K-12), life science (5-12), mathematics (5-12), physics (5-12), social studies (5-12), Spanish (K-12), visual arts (K-12), and vocal music (K-12).

Students planning to seek Minnesota teaching licensure at the secondary school level must complete licensure requirements in the discipline(s) of the subject(s) they intend to teach, the secondary teacher education program, and state and federally mandated examinations for new teachers. A minimum GPA of 2.50 overall and in required licensure area(s) and education courses is required. All courses required for teaching licensure in secondary
education (discipline, professional education, or other courses) must be completed with a grade of C- or higher.

**Licensure Area Requirements**
An equivalent honors course can be used to fulfill any of the following requirements.

**Business 5-12 (49-52 cr)**
- Econ 1111—Principles of Microeconomics
- Econ 1112—Principles of Macroeconomics
- Mgmt 2101—Principles of Accounting I
- Mgmt 2102—Principles of Accounting II
- Mgmt 3101—Financial Management
- Mgmt 3133—Managerial Accounting
- Mgmt 3141—Business Law I
- Mgmt 3142—Business Law II
- Mgmt 3161—Labor Management Relations I
- Mgmt 3162—Labor Management Relations II
- Mgmt 3201—Marketing Principles and Strategy
- Mgmt 3221—Management and Organization Theory
- Mgmt 3601—Transnational Enterprise
- Mgmt 4896—Internship

*One of two:*
- Stat 1601—Introduction to Statistics
- Stat 2601—Statistical Methods

**Chemistry 5-12 (58-67 cr)**
- Biol 2101—Evolution of Biodiversity (Biol 1101 prerequisite is waived)
- Biol 2111—Cell Biology
- Chem 1101—General Chemistry I
- Chem 1102—General Chemistry II
- Chem 2301—Organic Chemistry I
- Chem 2302—Organic Chemistry II
- Chem 2311—Organic Chemistry Lab I

*One of two:*
- Chem 2321—Organic Chemistry Lab II
- Chem 3101—Analytical Chemistry
- Chem 3501—Physical Chemistry I
- Chem 3xxx level or above, one course

*One of three:*
- Chem 4901 and 4902—Chemistry Seminar I and II (on research)
- Chem 2993 or 3993 or 4993—Directed Study in Research
- Other research experience (i.e. UROP, internship) with discipline approval
- Geol 1101—Physical Geology
- Math 1101—Calculus I
- Math 1102—Calculus II
- Phys 1101—General Physics I
- Phys 1102—General Physics II

**Communication Arts and Literature 5-12 (60 cr; fulfills the requirements for an English major)**
- Engl 1100—Variable Topics in Literature
- Engl 2011—Analysis of Poetry (prerequisite)
- Engl 3001—Advanced Writing
- Engl 3021—Grammar and Language
- Engl 3031—Shakespeare

*One of three:*
- Engl 3101—Medieval to Renaissance in English Literature
- Engl 3111—British Romanticism: Origins and Influence
- Engl 3121—Victorian and Modern British Literature

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

*One of three:*
- Engl 3301—Multicultural Literature
- Engl 3311—Native American Literature
- Engl 3321—Women’s Literature

*One of two:*
- Spch 1000—Variable Topics in Introduction to Public Speaking
- Spch 1051—Introduction to Public Speaking
- Spch 1061—Interpersonal Communication
- Spch 1071—Introduction to Groups: Principles and Practices
- Spch 2101—Introduction to Speech Communication
- Spch 3301—Media Theory, Criticism, and Problems
- Spch 4151—Argumentation: Theory and Practice
- Th 2211—Oral Interpretation

**Dance and Theatre Arts K-12 With a Theatre Specialization (47 cr)**
- Th 1101—The Theatre Experience: An Introduction
- Th 1111—Fundamentals of Acting
- Th 1301—Fundamentals of Design
- Th 2101—Fundamentals of Directing
- Th 2211—Oral Interpretation
- Th 2301—stagecraft
- Th 3101—World Theatre: History and Literature I
- Th 3102—World Theatre: History and Literature II

*One of two:*
- Th 3201—Acting and Directing I
- Th 3202—Acting and Directing II
- Th 4301—Scenic Design
- Spch 3311—Social Uses of Media
- WSS 1332—Intermediate Jazz Dance
- WSS 1333—Intermediate Modern Dance
- WSS 2301—Dance Production

Three major production responsibilities in faculty-directed productions, two of which must be in the junior and senior years.
Earth and Space Science 5-12 (56-61 cr)
Biol 2101—Evolution of Biodiversity (Biol 1101 prereq is waived)
Biol 2111—Cell Biology
Chem 1101—General Chemistry I
Chem 1102—General Chemistry II
Geol 1101—Physical Geology
Geol 1121—Historical Geology: Earth History and Changing Scientific Perspectives
Geol 2101—Mineralogy and Crystallography
Geol 2111—Petrology and Petrography
Geol 2121—Sedimentology and Stratigraphy
One of three:
Geol 4901 and 4902—Geology Senior Seminar and Presentations (on research)
Geol 2993 or 3993 or 4993—Directed Study in Research
Other research experience (i.e. UROP, internship) with discipline approval
Math 1101—Calculus I
Math 1102—Calculus II
Phys 1101—General Physics I
Phys 1102—General Physics II
Also recommended:
Geol 3101—Structural Geology
Geol 3501—Hydrology
French K-12 (44 cr)
Fren 1001—Beginning French I
Fren 1002—Beginning French II
Fren 2001—Intermediate French I
Fren 2002—Intermediate French II
Fren 3001—Conversation and Composition
Fren 3011—Reading and Analysis of Texts
Fren 3021—Modern France
Minimum 16 credits of Fren 3xxx or above courses
Proficiency examination in French
German K-12 (48 cr)
Ger 1001—Beginning German I
Ger 1002—Beginning German II
Ger 2001—Intermediate German I
Ger 2002—Intermediate German II
Ger 3001—Beginning German Conversation and Composition I
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 of two:
Ger 3201—German Classicism
Ger 3211—German Romanticism
Two Ger 3xxx elective courses (4 cr each)
Proficiency examination in German
Instrumental Music K-12 (47 cr)
Mus 0100—Concert Attendance (7 enrollments minimum)
Mus 1101—Core Studies I: Music Theory I
Mus 1102—Core Studies I: Music Theory II
Mus 1300—Concert Band and/or 1340—Orchestra (7 enrollments minimum)
Mus 2101—Core Studies II: Music Theory III
Mus 2102—Core Studies II: Music Theory IV
Mus 3101—Core Studies III: Medieval, Renaissance, and Baroque Music
Mus 3102—Core Studies III: Classical, Romantic, and 20th Century Music
Mus 1200-1219—Individual Performance Studies (4-5 total enrollments)*
Mus 3200-3219—Advanced Individual Performance Studies in wind, string, percussion, or keyboard (2-3 semesters)*
Mus 3301—Instrumental Techniques—Woodwind
Mus 3302—Instrumental Techniques—Brass and Percussion
Mus 3303—Instrumental Techniques—Strings
Mus 3304—Vocal Techniques
Mus 3311—Conducting Techniques
Mus 3321—Instrumental Conducting and Materials
Mus 4901—Senior Project
Piano Proficiency Test
Secondary performance competence on another family (wind, string, or percussion)
* If jury exam is passed end of 4th semester: 4 cr
Mus 1200-1219 and 3 cr of Mus 3200-3219; if jury exam is passed end of 5th semester: 5 cr Mus 1200-1219 and 2 cr of Mus 3200-3219
Life Science 5-12 (82 cr; fulfills the requirements for a biology major)
Biol 1101—Freshman Seminar in Biological Principles
Biol 2101—Evolution of Biodiversity
Biol 2111—Cell Biology
Biol 3101—Genetics
Biol 3121—Molecular Biology
Biol 3131—Ecology
Biol 4000-4500 (8 cr minimum)
Biol 4901—Senior Seminar
Chem 1101—General Chemistry I
Chem 1102—General Chemistry II
Chem 2301—Organic Chemistry I
Chem 2302—Organic Chemistry II
Chem 2311—Organic Chemistry Lab I
Geol 1101—Physical Geology
Math 1101—Calculus I
Math 1102—Calculus II
Phys 1101—General Physics I
Phys 1102—General Physics II
One of two:
Stat 1601—Introduction to Statistics
Stat 2601—Statistical Methods
One of four:
Biol 4000-4500 (beyond 8-cr minimum above)
Geol 3111—Introduction to Invertebrate Paleontology
Psy 3201—Comparative Psychology
Psy 3211—Biological Psychology

Mathematics 5-12 (47 cr)
CSci 1211—Introduction to Problem Solving with Java
Math 1101—Calculus I
Math 1102—Calculus II
Math 2111—Linear Algebra
Math 2211—History of Math
Math 2301—Mathematical Perspectives
Math 3211—Geometry
Math 3221—Analysis
Math 3231—Abstract Algebra
Math 3411—Discrete and Combinatorial Mathematics
Math 4901—Senior Seminar
Stat 2611—Mathematical Statistics

Physics 5-12 (69-74 cr)
Biol 2101—Evolution of Biodiversity (Biol 1101 prereq is waived)
Biol 2111—Cell Biology
Chem 1101—General Chemistry I
Chem 1102—General Chemistry II
Geol 1101—Physical Geology
Math 1101—Calculus I
Math 1102—Calculus II
Math 2101—Calculus III
Math 2401—Differential Equations
Phys 1101—General Physics I
Phys 1102—General Physics II
Phys 2101—Modern Physics
Phys 2201—Circuits and Electronic Devices
Phys 3101—Classical Mechanics
Phys 3301—Optics

One of two:
Chem 3501—Physical Chemistry I
Phys 3501—Statistical Physics

One of three:
Phys 4901—Senior Thesis (on research)
Phys 2993 or 3993 or 4993—Directed Studies in Research
Other research experience (e.g., UROP, internship) with discipline approval

Social Studies 5-12 (49-57 cr; fulfills requirements for a social science major)
Anth 1111—Introductory Cultural Anthropology
Econ 1112—Macroeconomics
Econ 1951—Seminar for Social Studies Majors

One of two:
Geog 1001—Problems in Geography
Geog 3111—Geography of Minnesota
Hist 1301—Introduction to United States History
Stat 1601—Introduction to Statistics or equivalent
Pol 1201—American Government and Politics
Psy 1051—Introduction to Psychology
Soc 1101—Introductory Sociology
Area of concentration—3-5 additional courses agreed upon with adviser.

Spanish K-12 (48 cr)
Span 1001—Beginning Spanish I
Span 1002—Beginning Spanish II
Span 2001—Intermediate Spanish I
Span 2002—Intermediate Spanish II
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 of two:
Span 3400—Variable Topics in Latin American Literature
Span 3500—Variable Topics in Spanish Peninsular Literature
Proficiency examination in Spanish

Visual Arts K-12 (58 cr)
ArtH 1101—Principles of Art
ArtS 1050—Beginning Ceramics
ArtS 1101—Basic Studio Drawing
ArtS 1102—Basic Studio Drawing
ArtS 1103—Basic Studio 2-D Design
ArtS 1104—Basic Studio 3-D Design
ArtS 1105—Basic Studio Discussion
ArtS 1106—Basic Studio Discussion
ArtS 2101—Second Year Drawing
ArtS 2102—Second Year Drawing
ArtS 3881—Junior Review
ArtS 4881—Senior Review
ArtS 4901—Senior Exhibit
Minimum 12 cr in one of the following media plus 6 cr in another and 3 cr in the third 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
Division Structure and Course Descriptions

Sculpture
ArtS 2401—Beginning Sculpture
ArtS 2402—Beginning Sculpture
ArtS 3400—Advanced Sculpture
Minimum 6 credits ArtS 2xxx or above electives
Minimum of 8 credits of ArtH courses

Vocal Music K-12 (47 cr)
Mus 0100—Concert Attendance (7 enrollments minimum)
Mus 1101—Core Studies I: Music Theory I
Mus 1102—Core Studies I: Music Theory II
Mus 1310—University Choir and/or 1320—Concert Choir (7 enrollments minimum)
Mus 2101—Core Studies II: Music Theory III
Mus 2102—Core Studies II: Music Theory IV
Mus 3101—Core Studies III: Medieval, Renaissance, and Baroque Music
Mus 3102—Core Studies III: Classical, Romantic, and 20th Century Music
Mus 1200—1219—Individual Performance Studies (4-5 total enrollments)*
Mus 3200—3219—Advanced Individual Performance Studies in voice or keyboard (2-3 semesters)*
Mus 3301—Instrumental Techniques—Woodwind
Mus 3302—Instrumental Techniques—Brass and Percussion
Mus 3303—Instrumental Techniques—Strings
Mus 3304—Vocal Techniques
Mus 3311—Conducting Techniques
Mus 3331—Choral Conducting and Materials
Mus 4901—Senior Project
Piano Proficiency Test
Secondary performance competence on an instrument (wind, string, percussion or keyboard)

Admission to the Program
During fall 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.

Requirements for admission include the following:
1. Successful completion of Psy 1051—Introduction to Psychology, Psy 1061—Introduction to the Development of the Child and Adolescent, and Ed 2101—Foundations and Issues in Education
   For students desiring more in-depth alternatives, Psy 1101 and 1102—Foundations of Psychology I and II, respectively, may be substituted for the Psy 1051 prerequisite, and both Psy 3401—Developmental Psychology I: Child Psychology and Psy 3402—Developmental Psychology II: Adolescence may be substituted for Psy 1061—Introduction to the Development of the Child and Adolescent.
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 and in required licensure area(s) and education courses.
5. Approximately 90 credits completed by the end of the junior year including demonstration of satisfactory progress in each licensure area.
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
2. Successful completion of licensure area methods course(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 passing score on the Minnesota Board of Teaching Pre-professional Skills Test (PPST).
6. A minimum GPA of 2.50 overall and in required licensure area(s) and education courses.
7. Approval of teacher education faculty based on recommendations from faculty in the student’s discipline.
Middle and Secondary School Licensure Requirements

Students planning to teach in Minnesota middle and secondary 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.


2. Successful completion of licensure area methods course(s).


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 and in required licensure area(s) and education courses.

6. All courses required for teaching licensure in secondary education (discipline, professional education, or other courses) must be completed with a grade of C- or higher.

7. A positive recommendation from the discipline and division offering the licensure area coursework and Division of Education.

8. Passing scores on state and federally mandated examinations for new teachers.

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 Middle and Secondary Student. (4 cr; prereq admission to the secondary teacher education program, ¶4102, 4103, methods) Study of the middle and secondary education student, including exceptionalities, individual differences, learning styles, self-esteem, motivation, communication skills, and multicultural education.


SeEd 4103f. Practicum Experience in the Middle and Secondary School. (2 cr; prereq ¶4101, 4102, methods; S-N only) Field experience in the middle and secondary school.

SeEd 4201s. Directed Student Teaching in the Middle and Secondary School. (10 cr; prereq 4101, 4102, 4103, methods, Spch 1000 or Spch 1051 or exemption; S-N only) Students teach for a period of 11 weeks demonstrating application of approaches to teaching and learning in the middle and secondary grades under the guidance of a cooperating teacher and University supervisor.

SeEd 4202f,s. Directed Student Teaching in the Middle and Secondary School. (1-16 cr; prereq #; S-N only) For students who need alternative or additional student teaching experience. Students demonstrate application of approaches to teaching and learning in middle and secondary grades under the guidance of a cooperating teacher and University supervisor.

SeEd 4204s. Directed Student Teaching in International School at the Middle and Secondary Level. (IP; 10 cr; prereq 4101, 4102, 4103, methods, Spch 1000 or Spch 1051 or exemptions; S-N only) Students teach for a period of 11 weeks demonstrating application of approaches to teaching and learning in the middle and secondary grades under the guidance of a cooperating teacher and University supervisor.

SeEd 4901s. The Teacher and Professional Development. (2 cr; prereq 4201 or 4204 or #) Professional development issues, including portfolio assessment.

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

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.”

Middle and 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 middle and secondary school. Students are required to complete methods course(s) in their licensure area(s). Methods courses are taken concurrently
Division Structure and Course Descriptions

with the secondary education block courses—SeEd 4101, 4102, 4103—and must be successfully completed before student teaching in a specific field.

ArtE 4103f. Methods of Teaching Art K-12. (4 cr; A-F only)
EngE 4102f. Methods of Teaching Communication Arts and Literature in the Middle School. (1 cr; A-F only)
EngE 4103f. Methods of Teaching Communication Arts and Literature in the Secondary School. (3 cr; prereq ¶EngE 4102; A-F only)
LanE 4103f. Methods of Teaching Foreign Language K-12. (4 cr; A-F only)
MgtE 4103f. Methods of Teaching Business in the Middle and Secondary School. (4 cr; A-F only)
MthE 4102f. Methods of Teaching Mathematics in the Middle School. (1 cr; A-F only)
MthE 4103f. Methods of Teaching Mathematics in the Secondary School. (3 cr; prereq ¶MthE 4102; A-F only)
MusE 4103f. Methods of Teaching Music K-12. (3 cr; A-F only)
MusE 4104f. Multicultural Music for the K-12 Music Educator. (1 cr; prereq #; A-F only)
SciE 4102f. Methods of Teaching Science in the Middle School. (1 cr; A-F only)
SciE 4103f. Methods of Teaching Science in the Secondary School. (3 cr; prereq ¶SciE 4102; A-F only)
SscE 4102f. Methods of Teaching Social Science in the Middle School. (1 cr; A-F only)
SscE 4103f. Methods of Teaching Social Science in the Secondary School. (3 cr; prereq ¶SscE 4102; A-F only)
The 4103f. Methods of Teaching Dance and Theatre Arts K-12. (4 cr; A-F only)

Major Requirements

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

Prerequisite courses

Engl 1100—Variable Topics in Interpreting Literature
Engl 2011—Introduction to 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
   Engl 3331—African American Literature
   Engl 3341—Chicana/o and U.S. Latina/o Literature

Electives: Four courses, at least two at the 3xxx and one at the 4xxx level.

Up to 4 credits of coursework with a grade of D may be used to meet the major requirements.

Minor Requirements

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

Prerequisite courses

Engl 1100—Variable Topics in Interpreting Literature
Engl 2011—Introduction to 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
   Engl 3331—African American Literature
   Engl 3341—Chicana/o and U.S. Latina/o Literature

English (Engl)

This discipline is in the Division of the Humanities. English is the study of literature and language—its historical, imaginative, and intellectual development.

Objectives—The English program engages students in the study of British and American literature of different periods, with an emphasis on various approaches to literary study. Students learn to discuss, orally and in writing, 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. The major offers both broad exposure to and in-depth study of literature and language, as well as courses in creative and expository writing. English courses combine analysis and writing to teach students to be effective critical and imaginative readers and writers.
Electives: One course at the 3xxx or 4xxx level. Up to 4 credits of coursework with a grade of D may be used to meet the minor requirements.

**Teacher Preparation Requirements**

Students seeking teaching licensure in communication arts and literature 5-12 should refer to the Education, Secondary (SeEd) section of this catalog. Students completing the course requirements for licensure in Communication Arts/Literature will earn an English major.

**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 1021f. Introduction to Creative Writing.** (ArtP; 4 cr; prereq #; not offered 2002-03)

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 1031. Imagining Contemporary America.** (HDiv; 4 cr; offered when feasible)

Examination of selected recent literary works reflecting the diversity of U.S. culture.

**Engl 1100. Variable Topics in Interpreting Literature.** (See specific topics for general education categories; 4 cr; repeatable when topic changes; offered when feasible)

Introduction to the study of literature. Emphasis on gaining basic skills of analysis. Topics vary.

**Engl 1102. The Environmental Imagination.** (Envt; 4 cr; offered when feasible)

Study of selected poetry and prose on nature and the environment.

**Engl 2011f,s. Introduction to Poetry and Poetic Language.** (4 cr; prereq 1011 or equiv)

A prerequisite to advanced courses in English. An introduction to the techniques of close reading and the analysis of poetry. Emphasis on appreciating and understanding poetic form.

**Engl 2100. Variable Topics in Writing.** (ArtP; 4 cr; repeatable when topic changes; prereq 1011 or equiv; offered when feasible)

Study of a topic or method(s) of writing not normally covered by other writing courses.

**Engl 3001f,s. Advanced Expository Writing.** (4 cr; prereq #)

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 #)

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 the English language. Historical development and current structure. Includes language variation and change, social history of language, phonology, syntax, semantics, development of English grammar, prescriptive versus descriptive grammar, and contemporary theories of grammar.

**Engl 3031s. Shakespeare.** (Hum; 4 cr; prereq 1100, 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 3041. Chaucer.** (Hum; 4 cr; prereq 1100, 2011; offered when feasible)

Concentrating on the Canterbury Tales but also reading some of Chaucer’s shorter poetry, students study the writing of this influential poet—especially his range of genres and language—as well as explore his fourteenth-century context (e.g., politics, plague, antifeminism, anticlericalism, peasants’ rebellions).

**Engl 3050f. Variable Topics in Literature and Language I.** (4 cr; repeatable when topic changes; prereq 1100, 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; prereq 1100, 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; prereq 1100, 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.

**Engl 3121s. Victorian and Modern British Literature.** (4 cr; prereq 1100, 2011)

Analysis of literature as a product and cause of cultural change, social history of language, phonology, syntax, semantics, development of English grammar, prescriptive versus descriptive grammar, and contemporary theories of grammar.

**Engl 3131. The English Novel.** (4 cr; prereq 1100, 2011; offered when feasible)

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

**Engl 3141. Irish Literature From 18th Century to the Present.** (4 cr; prereq 1100, 2011; offered when feasible)

Readings in Irish literature and its relationship to historical contexts.

**Engl 3201f. The Pluralistic Roots of U.S. Literature.** (4 cr; prereq 1100, 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.
Division Structure and Course Descriptions

Engl 3211s. New Visions of U.S. Literature. (4 cr; prereq 1100, 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.

Engl 3221. Development of the Novel in the United States. (4 cr; prereq 1100, 2011; offered when feasible)
Study of the development of the American novel in the 19th and 20th centuries.

Engl 3301s. Multicultural Literature. (4 cr; prereq 1100, 2011)
Comparative examination of literature by African American, Native American, Chicano/a, and Asian American writers.

Engl 3311f. Native American Literature. (4 cr; prereq 1100, 2011; not offered 2001-02)
Study of American Indian literature written in English from 19th century to the present and its historical and cultural contexts. Emphasis on the literature’s engagement with language, identity, land, and sovereignty.

Engl 3321s. Women’s Literature. (4 cr; prereq 1100, 2011)
Examination of women writers as a distinct group, with attention to ethnic, class, and cultural differences; includes readings in feminist theory.

Engl 3331f. African American Literature. (4 cr; prereq 1100, 2011; not offered 2002-03)
Study of African American literature from the slave narrative to the contemporary novel, with attention to formative historical and cultural contexts, as well as theoretical and critical debates.

Engl 3341. Chicana/o and U.S. Latina/o Literature. (4 cr; prereq 1100, 2011; offered when feasible)
Study of Chicana/o and U.S. Latina/o literature from late nineteenth century to present and its historical and cultural contexts. Particular attention given to themes of language, identity, land, immigration/migration, and spirituality.

Engl 3401. Modern British and American Poetry. (4 cr; prereq 1100, 2011; offered when feasible)
Study of important movements and figures in 20th-century poetry from 1900 to the present.

Engl 4000f,s. Senior Seminar: Variable Topics in Literature and Language II. (4 cr; repeatable when topic changes; prereq 1100, 2011, #)
A capstone experience for majors. In-depth study of a literary subject. Conducted as a seminar. Topics vary.

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
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 3121. Renaissance to Modern Art. (FA; 4 cr)
Survey of the major works of art of western Europe from 1400 to the present.

ArtH 3131f. Northern Renaissance Art. (FA; 4 cr; prereq 1101 or 1111 or 1121 or jr status; not offered 2002-03)
Painting, sculpture, and architecture of France, Belgium, the Netherlands, and Germany during the late 14th century to the mid-16th century, tracing the development of oil painting and interpreting the significant imagery of the period.

ArtH 3151s. High Renaissance Art. (FA; 4 cr; prereq 1101 or 1111 or 1121 or jr status; not offered 2002-03)
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 3161f. 16th-Century European Art. (FA; 4 cr; prereq 1101 or 1111 or 1121 or jr status; not offered 2002-03)
A study of art during a period of cultural upheaval and radical change in Italy and northern Europe from 1520 to 1590.

ArtH 3171s. Baroque Art. (FA; 4 cr; prereq 1101 or 1111 or 1121 or jr status; not offered 2002-03)
A sociohistorical consideration of the stylistic and thematic diversity present in the works of such 17th-century masters as Caravaggio, Bernini, Velazquez, Rembrandt, and Vermeer.

ArtH 3181f. Rococo to Revolution. (FA; 4 cr; prereq 1101 or 1111 or 1121 or jr status; not offered 2001-02)
An examination of the visual arts in relation to social and historical developments in 18th-century Europe, such as the Enlightenment, the French Revolution, archaeological discoveries, the Grand Tour, and the rise of art criticism.

ArtH 3201f. 19th-Century European Art through Post-Impressionism. (FA; 4 cr; prereq 1101 or 1111 or 1121 or jr status; not offered 2002-03)
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; prereq 1101 or 1111 or 1121 or jr status; not offered 2002-03)
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 3281s. Women and Art. (FA; 4 cr; prereq 1101 or 1111 or 1121 or jr status; not offered 2001-02)
An historical survey of the role of women as creators and patrons of the visual arts in Western European and American societies, from antiquity to the present.

Econ 4121s. International Trade Theory. (SS; 2 cr; prereq 3201 or #: not offered 2002-03)
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 Interpreting Literature.
(See specific topics for general education categories; 4 cr; repeatable when topic changes; offered when feasible)
Introduction to the study of literature. Emphasis on gaining basic skills of analysis. Topics vary.

Engl 3131. The English Novel. (4 cr; prereq 1100, 2011; offered when feasible)
Study of the development of the English novel in the 18th and 19th centuries.

Fren 3011s. Reading and Analysis of Texts. (Hum; 4 cr; prereq 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. Modern France. (IP; 4 cr; prereq 2002 or #: not offered 2001-02)
A study of the evolution of French culture from 1870 to the present as France developed into a modern, multicultural democracy.

Fren 3041s. Francophone Worlds. (IP; 4 cr; prereq 2002 or #: not offered 2002-03)
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 3051f. French Literature I: Medieval and Early Modern France. (Hum; 4 cr; prereq 3011; not offered 2001-02)
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; prereq 3011; not offered 2002-03)
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; prereq 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; prereq 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; prereq 3101, 3102 or #: not offered 2002-03)
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; prereq 3101, 3102 or #: not offered 2001-02)
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.
**Divisions & Courses**

**Ger 3300f,s. 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; prereq 3011, #; not offered 2002-03) 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.

**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 Britain, 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 2002-03) 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. 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; prereq 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 3301s. Contemporary Political Ideologies.** (Hum; 4 cr; prereq 1101 or #) 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; prereq 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 3421f. International Organizations.** (E/CR; 4 cr; prereq 1401 or #) 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 3452s. Variable Topics in International Relations: International Relations Theory.** (IP; 4 cr; prereq 1401 or #; offered when feasible) 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; prereq 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 3502f. Government and Politics of Europe.** (SS; 4 cr; prereq 1101 or #; not offered 2001-02) The comparative study of contemporary government and politics in Europe with special attention to the influence of economic, cultural, and other factors upon their formation. Comparative analysis of parties, bureaucracy, legislatures, and executives and of the way in which they reflect and contribute to the political life of the European peoples.
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—Modern France

a minimum of 16 additional credits from Fren courses at the 3xxx level or above

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—Modern France

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

Teacher Preparation Requirements

Students seeking teaching licensure in French K-12 should refer to the Education, Secondary (SeEd) section of this catalog.

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; prerequisite 1001 or placement or #)
Continuation of 1001.
Fren 1021. French Language and Culture in Paris I. (FL; 4 cr)
Four weeks of intensive beginning French language and culture in Paris, guided visits to cultural and historical sites.

Fren 1021H. Honors: French Language and Culture in Paris I. (FL; 4 cr; prereq # for students not in Honors Program)
Four weeks of intensive beginning French language and culture in Paris, guided visits to cultural and historical sites.

Fren 1302f. French Cinema. (IP; 4 cr)
Same as Hum 1302. History of filmmaking in France from the Lumière brothers to the present; introduction to major trends in film theory. All films have English subtitles. Taught in English.

Fren 1302Hs. Honors: French Cinema. (IP; 4 cr; prereq # for students not in Honors Program)
Same as Hum 1302H. History of filmmaking in France from the Lumière brothers to the present; introduction to major trends in film theory. All films have English subtitles. Taught in English.

Fren 2001f. Intermediate French I. (IP; 4 cr; prereq 1002 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 2002s. Intermediate French II. (IP; 4 cr; prereq 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; prereq 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; prereq 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 3012. French Play. (ArtP; 2 cr; prereq 2001 or #; offered when feasible)
Reading, study, and presentation of a short contemporary play. Enhances fluency and familiarity with the modern French idiom.

Fren 3021f. Modern France. (IP; 4 cr; prereq 2002 or #; not offered 2001-02)
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; prereq 2002 or #; not offered 2002-03)
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. Francophone Worlds. (IP; 4 cr; prereq 2002 or #; not offered 2002-03)
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 3051f. French Literature I: Medieval and Early Modern France. (Hum; 4 cr; prereq 3011; not offered 2001-02)
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; prereq 3011; not offered 2002-03)
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 3060. French Language and Culture in Paris II. (IP; 4 cr; repeatable to 8 cr; prereq 1002)
Four weeks of intermediate or advanced French language study at the Sorbonne, Paris IV; guided visits to cultural and historical sites.

Fren 3060H. Honors: French Language and Culture in Paris II. (IP; 4 cr; repeatable to 8 cr; prereq 1002, # for students not in Honors Program)
Four weeks of intermediate or advanced French language study at the Sorbonne, Paris IV; guided visits to cultural and historical sites.

Fren 4011s. Creative Writing and Translation. (Hum; 4 cr; prereq 2002 or equiv or #; offered when feasible)
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 4021f. Readers’ Theatre. (Hum; 4 cr; prereq 2002 or equiv or #; offered when feasible)
Improvisation on themes and situations. The study of texts of France and other French-speaking countries suitable for oral interpretation, and the preparation of a program.

Fren 4100f,s. Variable Topics in French. (Hum; 4 cr;repeatable when topic changes; prereq 2002 or equiv or #; offered when feasible)
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 political history, 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; prereq 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 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.”

**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 2051—Field and Research Methods in Geology I**

**Geol 2101—Mineralogy and Crystallography**

**Geol 2111—Igneous and Metamorphic Petrology**

**Geol 2121—Sedimentology and Stratigraphy**

**Geol 3051—Field and Research Methods in Geology II**

**Geol 3101—Structural Geology**

**Geol 3196—Geology Field Camp**

**Geol 4901—Geology Senior Seminar**

**Geol 4902—Geology Senior Seminar Presentations**

8 additional credits in Geol courses at 2xxx or above

**Chem 1101—General Chemistry I**

**Chem 1102—General Chemistry II**

or **Chem 1102H—Honors: General Chemistry 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, mathematics, or statistics 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 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 2051—Field and Research Methods in Geology I**

**Geol 2101—Mineralogy and Crystallography**

**Geol 2111—Igneous and Metamorphic Petrology**

**Geol 2121—Sedimentology and Stratigraphy**

**Geol 3051—Field and Research Methods in Geology II**

**Chem 1101—General Chemistry I**

**Chem 1102—General Chemistry II**

or **Chem 1102H—Honors: General Chemistry II**

4 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 seeking teaching licensure in earth and space science 5-12 should refer to the Education, Secondary (SeEd) section of this catalog.

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; not offered 2001-02) 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 1012f. Oceanography. (Sci; 4 cr; may not count toward geol major or minor; not offered 2002-03) Physiography and geological evolution of ocean basins; marine sediments; coastal processes and environments; chemical evolution, and chemical and physical properties of seawater; ocean-atmosphere interactions; deep-ocean circulation; waves and tides; marine ecosystems. (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 1101Hf. Honors: Physical Geology. (Sci-L; 4 cr; prereq # for students not in Honors Program; not offered 2001-02) 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 2051f. Field and Research Methods in Geology I. (Sci-L; 2 cr; prereq 1101 or 1101H, ¶2101) Introduction to geologic research methods and field techniques; use of library resources; geologic field methods, geologic sampling, fundamentals of mapping and data collecting using Brunton compass and Global Positioning System (GPS) techniques. (2 hrs lect., 2 hrs lab)

Geol 2101f. Mineralogy and Crystallography. (Sci-L; 4 cr; prereq 1101 or 1101H, 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. Igneous and Metamorphic Petrology. (Sci-L; 4 cr; prereq 2101) Classification, composition, genesis, and natural occurrence of igneous 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; prereq 2101) Processes of sedimentation, including origin, transportation, and deposition of sediments; interpretation of sedimentary environments. Principles of stratigraphy and their applications. Lab work includes sedimentary particle analysis; stratigraphic sections; and interpretation of ancient sedimentary environments based on stratified sequences of sedimentary rock. (3 hrs lect, 3 hrs lab and field trips)

Geol 2131f. Geomorphology. (Sci; 4 cr; prereq 1101 or 1101H; not offered 2002-03) 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; prereq 1101 or 1101H; not offered 2001-02) 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 3000s,s. Variable Advanced Topics in Geology. (Sci; 4 cr; repeatable when topic changes; prereq #) Lecture or lecture and lab treatment of topics not included in the regular curriculum. Possible topics include economic geology and global tectonics.

Geol 3051f. Field and Research Methods in Geology II. (Sci-L, 2 cr; prereq 2111; ¶2121) Further introduction to geologic research methods and field techniques; advanced techniques of field mapping and data collecting interpretation of topographic and geologic maps and aerial photographs; preparation of geological reports, maps and cross section; application of Geographic Information System (GIS) techniques. (2 hrs lect, 2 hrs lab)

Geol 3101s. Structural Geology. (Sci-L; 4 cr; prereq 2111 or ¶) Elementary concepts of stress and strain, theory of rock deformation; description and classification of structures in the Earth’s crust; application of geometric, analytical, and map interpretation techniques to solving structural problems; field mapping problems. (3 hrs lect, 3 hrs lab and field trips)
**Geol 3111s. Introduction to Invertebrate Paleontology.** (Sci-L; 4 cr; prereq 1121 or #; not offered 2002-03) 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; prereq 1121, 2121, 3101) Identification and solution of geological problems in the field, including stratigraphic correlation, construction of cross sections and geologic maps, report preparation, field mapping, structural analysis, and environmental interpretation of Precambrian and Paleozoic rock units. Offered only during summer at a 6-week residential camp.

**Geol 3401f. Geophysics.** (Sci; 4 cr; prereq Math 1101, Phys 1101 or #; not offered 2002-03) 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. (4 hrs lect)

**Geol 3411s. Advanced Stratigraphy: Subsurface Methods.** (Sci; 4 cr; prereq 1101 or 1101H, 2121 and #; not offered 2002-03) Techniques and methods of investigating subsurface geologic and stratigraphic features. Includes a discussion of drilling methods, subsurface mapping methods, and techniques for interpreting subsurface geologic trends. (2 hrs lect, 4 hrs lab)

**Geol 3421s. Airphoto Interpretation.** (Sci; 4 cr; prereq 1101 or 1101H and #; not offered 2001-02) 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; prereq Math 1101 or #) Elements of surface water hydrology; groundwater occurrence and aquifer characteristics; groundwater flow mechanics and flow nets; well hydraulics; groundwater contamination, contaminant transport, and remediation; management and legal aspects of water resources. (4 hrs lecture)

**Geol 3601f. Introduction to Geochemistry.** (Sci; 4 cr; prereq Chem 1101, #; not offered 2001-02) Applying chemistry to geologic problems such as weathering, sedimentary processes and diagenesis, formation of evaporites and ore deposits, magma genesis and magmatic differentiation; thermodynamic functions and the Phase Rule; oxidation potential and Eh-pH diagrams; isotopic geochemistry and geochronology. (3 hrs lect)

**Geol 4120s. Advanced Sedimentology: Depositional Systems.** (Sci; 4 cr; repeatable to 8 cr; prereq 2121; not offered 2002-03) In-depth investigation of selected depositional environments and recognition of specific depositional sequences through time. (4 hrs lect, 2 hrs lab)

**Geol 4130s. Advanced Geomorphology.** (Sci; 4 cr; repeatable to 8 cr; prereq 2131; not offered 2002-03) Surficial processes and the resulting landforms; may include catastrophic events, large lakes, arid regions geomorphology or the evolution of the Badlands. (3 hrs lect, 3 hrs lab and field trips)

**Geol 4140f. Advanced Glacial and Quaternary Geology.** (Sci; 4 cr; repeatable to 8 cr; prereq 2141; not offered 2002-03) Glacial geology and glacial history; may include pre-pleistocene glaciations, quaternary stratigraphy, or subglacial processes. (3 hrs lect, 3 hrs lab and field trips)

**Geol 4901f. Geology Senior Seminar.** (1 cr; required for geol major; prereq #) Capstone experience in geology. Discussion of selected topics of geologic interest.

**Geol 4902s. Geology Senior Seminar Presentations.** (1 cr; required for geol major; prereq #) Capstone experience in geology. Presentations of research projects.

**Geol 1993f,s, 2993f,s, 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.”

**Continuing Education Courses**

**Geol 2301. CE: Geology of Minnesota.** (Sci-L; 4 cr; offered summers as feasible) Active, hands-on learning both in class and on field class trips to selected localities throughout the state. Field trips include: Pipestone National Monument; glacial geology of west-central Minnesota; geology of the Minnesota River Valley; basalts of Taylors Falls/ Interstate State Park; Minnesota’s Iron Ranges; Isle Royale National Park.

**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...
Division Structure and Course Descriptions

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
Students seeking teaching licensure in German K-12 should refer to the Education, Secondary (SeEd) section of this catalog.

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 available 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; prereq 1001 or placement or #)
Continuation of 1001.

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

Ger 2002s. Intermediate German II: German Culture and Civilization. (IP; 4 cr; prereq 2001 or #)
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; prereq 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; prereq 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; prereq 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; prereq 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; prereq 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; prereq 3101 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; prereq 3101, 3102 or #; not offered 2002-03)
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; prereq 3101, 3102 or #; not offered 2001-02)
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; prereq 3101 or 3102 or #; not offered 2001-02)
Selected works by contemporary German, Austrian, and Swiss playwrights: Brecht, Duerrenmatt, Frisch, Handke, Horvath, and Hacks.

Ger 3300f,s. 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 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 3400f,s. Variable Topics in German With German Discussion. (IP; 4 cr; repeatable when topic changes; prereq 3101, 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; prereq 3101 or 3102 or #; not offered 2002-03)
Focus is on the German women’s movement during the twentieth century, historical relationship of gender and class, and lives of women from various ethnic backgrounds in Germany and Austria. Short stories, essays, and poems document the evolution of feminist literary theory in German studies.

Ger 3601f. Studies in German Literature. (Hum; 4 cr; prereq 3011, #; not offered 2002-03)
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; prereq 3011 or #; not offered 2001-02)
Selected readings in Austrian literature from 1875 to 1925, including Marie von Ebner-Eschenbach, Rainer Maria Rilke, Arthur Schnitzler, and Hugo von Hofmannsthal. 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 #)

Ger 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.”

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
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 1101—Introduction to World History to 1500
or
Hist 1102—Introduction to World History Since 1500
Hist 4110-4120—Tutorial in History
28 additional credits in Hist courses
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.

Minor Requirements
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 social studies 5-12 should refer to the Education, Secondary (SeEd) section of this catalog.

Course Descriptions
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.

Hist 2301f. American Indians and the United States: A History. (HDiv; 4 cr; offered when feasible)
The experience of the original Americans and their interaction with later immigrants.

Hist 2311f. African American History. (HDiv; 4 cr; offered when feasible)
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; offered when feasible)

Hist 3003s. World War I. (Hist; 4 cr; offered when feasible)

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 3152. Modern Middle East from Imperialism to Independence, 1876-1948. (Hist; 4 cr)

Hist 3152H. Honors: Modern Middle East, Imperialism to Independence, 1876-1948. (Hist; 4 cr; prereq # for students not in Honors Program)
Examination of the diplomatic, political, economic, social, and cultural forces that shaped the emerging nation-states in the Middle East.

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 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;
repeateable when topic changes)
Possible topics include the Civil War era, American 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 2002-03)

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

Hist 3353s. World War II. (Hist; 4 cr; offered when feasible)

Hist 3357. African American History Since 1865. (HDiv; 4 cr)
The African-American experience in historical perspective: the emancipation era; struggles for freedom and equality after slavery; cultural, economic, political and social development in an industrial and post-industrial society.

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. (HDiv; 4 cr)

Hist 3452. Minnesota History. (Hist; 4 cr)

Hist 3452H. Honors: Minnesota History. (Hist; 4 cr; prereq # for students not in Honors Program)
Examination of the social, cultural and political history of Minnesota; emphasis on ethnicity, political radicalism and rural life. The honors section will emphasize intensive reading and discussion; and will require the completion of a major research paper utilizing primary sources.

Hist 3453. Immigration. (Hist; 4 cr)
American immigration history from the colonial period to the present.

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.

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; prereq 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; prereq 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; prereq WoSt 1101 or Hist 1101, Hist 1102, Hist 1301; offered when feasible)
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. (Hist; 4 cr; prereq WoSt 1101, Hist 1101 or Hist 1102 or Hist 1201)

Hist 4110-4120f,s. Tutorial in History. (1 cr–4110, 4 cr–4120; no credit for 4110 until 4120 completed; repeatable to 10 cr; prereq history major or #)
A culminating historical research experience. Students should register for 4110 before 4120.

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

Hist 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.”

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; offered when feasible)
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; offered when feasible)
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; offered when feasible)
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 1300H. Honors: Variable Topics in French Literature and Culture. (See specific topics for general education categories; 4 cr; repeatable when topic changes; prereq # for students not in Honors Program)
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 1301H. Honors: Literature and Culture of French-Speaking Africa and the Caribbean. (IP; 4 cr; prereq # for students not in Honors Program)
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 1302Hs. Honors: French Cinema. (IP; 4 cr; prereq # for students not in Honors Program)
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 1303H. Honors: Paris as Text/Image/Sound. (IP; 4 cr; prereq # for students not in Honors Program; not offered 2002-03)
This course explores how representations of Paris in literature, film, music, and photography have been a key to the construction and the lived experience of the city and how new forms of writing, image-making, and sound production have emerged from the modern metropolis.

Hum 1451s. German Literature in Film. (IP; 4 cr; does not count toward German major or minor; not offered 2002-03)
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 1451Hs. Honors: German Literature in Film. (IP; 4 cr; does not count toward German major or minor; prereq # for students not in Honors Program; not offered 2002-03)
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 1500Hs. Honors: Contemporary Latin American Novel in Translation. (IP; 4 cr; repeatable with #; does not count toward Spanish major or minor; prereq # for students not in Honors Program)
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,s. First-Year Seminar: Human Diversity.** (FYS; 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; offered summer only; S-N only)
Introduction to computing technology, writing, and 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.)

**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.** (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; prereq 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 1993f,s, 2993f,s, 3993f,s, 4993f,s. Directed Study. (1-5 cr; repeatable; prereq #) Interdisciplinary studies. Directed Study Approval Form with signature required for registration.

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.”

Brazilian and Portuguese Studies

Continuing Education Courses


IS 1302s. CE: Dakota Language II. (FL; 4 cr) A continuation of 1301 with greater emphasis on conversation and culture.

IS 2011f,s. CE: English Language Teaching Assistant Program. (IP; 12 cr; S-N only) 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; prereq 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; prereq 1111 or Soc 1101)

Anth 2302s. Women in Latin America. (IP; 4 cr; prereq 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.

ArH 3251s. Pre-Columbian Arts of the Americas. (FA; 4 cr; prereq 1101 or 1111 or 1121 or jr status; not offered 2001-02) 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; prereq 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; prereq 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; prereq 1001 or placement or #) Second course in the sequence beginning with 1001.

Span 2001f. Intermediate Spanish I. (IP; 4 cr; prereq 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; prereq 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) 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; prereq 3001, #3101) Second course in the sequence beginning with 3001.

Span 3101s. Introduction to Spanish Literature. (Hum; 4 cr; prereq 2002, #3302) 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 Peninsular Literature II. (Hum; 4 cr; prereq 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; prereq 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; prereq 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; prereq 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 #)  
Study of intercultural communication from an interpersonal and group perspective.

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)

Stat 1601—Introduction to Statistics  
or  Stat 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.

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 1111—Principles of Microeconomics
Econ 1112—Principles of Macroeconomics
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 3302—Personality
Psy 3313—Psychopathology
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
Spc 1061—Interpersonal Communication
Spc 3411—Intercultural Communication Theory and Research
Spc 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 2300, s. Variable Topics in Latin American Cultures and Societies. (IP; 4 cr; repeatable when topic changes; prereq 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; prereq 1111 or Soc 1101)

Anth 2302s. Women in Latin America. (IP; 4 cr; prereq 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; prereq 1111 or Soc 1101)

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 2402f. American Indian Ethnography. (HDiv; 4 cr; prereq 1111 or Soc 1101; not offered 2001-02)

An analysis of ethnographic materials collected by and from American Indians, written by American Indian authors or with their participation.

Anth 2403s. American Indians in the Cinema. (Hum; 4 cr; prereq 1111 or Soc 1101)

An analysis of the representations and misrepresentations of American Indians in the cinema, television, and common culture of the United States.

Anth 2404. Introduction to the Peoples of North America. (HDiv; 4 cr; prereq 1111 or Soc 1101; not offered 2001-02)

An introduction to the societies and cultures of the peoples of North America (Canada, United States, Mexico) focusing upon the "traditional" (or pre-European contact) conditions.

Anth 2405f. American Indian Education. (HDiv; 4 cr; prereq 1111 or Soc 1101)

An analysis of the history, theory, and ethnographic data related to the uses, actions, and foci of the American educational system and the interactions of various American Indian individuals and groups within that system.

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; prereq 1111 or Soc 1101; 4 addtl cr in Anth or Soc recommended; not offered 2001-02)

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. (Envt; 4 cr; repeatable when topic changes; prereq 1111 or Soc 1101 or #)

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; prereq 1111 or Soc 1101 or #)

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; prereq 1111 or Soc 1101 or #)

Econ 1111f,s. Principles of Microeconomics. (SS; 4 cr; prereq high school algebra or #)


Econ 1112f,s. Principles of Macroeconomics. (SS; 4 cr; prereq high school algebra or #)

Introduction to basic economic problems, concepts, and theoretical models. Measurement of economic performance; national income, inflation and unemployment; competing macroeconomic theories and stabilizing policies.
Econ 3201f. Microeconomic Theory. (SS; 4 cr; prereq 1111, Math 1101 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; prereq 1112, Math 1101 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; prereq 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; prereq 1001 or 1002 or 1201 and WoSt 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. (E/Cr; 2 cr; prereq 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.

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

Mgmt 3151. Human Resources Management I. (E/Cr; 2 cr; prereq jr, 10 cr 3xxx or 4xxx human services courses or #) Topics in human resource management; legal issues, planning, recruitment, selection, and training.

Mgmt 3152. Human Resources Management II. (HDiv; 2 cr; prereq 2101 or #; offered when feasible) Topics in human resource management: evaluating employee performance, compensation and benefits, safety, labor relations, international human resource management.

Pol 3201f. Legislative Process. (SS; 4 cr; prereq 1201 or #) 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 3221f. Judicial Politics. (SS; 4 cr; prereq 1201 or #; not offered 2002-03) 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 certification voting.

Pol 3260sf.s. Variable Topics in American Politics. (See specific topics for general education categories; 4 cr; repeatable when topic changes; prereq 1201 or #) Selected topics in American politics such as state and local politics, media and politics, minorities and social policy, and political psychology.

Pol 3263s. Political Psychology. (SS; 4 cr; prereq 1201; Psy 1051 or # recommended; not offered 2002-03) 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; prereq 1201 or #; not offered 2001-02) 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.

Psy 1061s. Introduction to the Development of the Child and Adolescent. (SS; 4 cr; prereq 1051 or both 1101, 1102 or #) 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. Designed for students aiming for teacher certification, who received prior credit in registration. Does not count for elective credit for the 16-credit psychology component of the LAHS major or for the psychology major or minor. A more in-depth alternative to this course is Psy 3401 and Psy 3402. Students double majoring in education and psychology should consider the Psy 3401 and 3402 alternative to this course.

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 2001-02) 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; prereq 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. (SS; 4 cr; prereq 1101, Stat 1601 or Stat 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; 4 cr; prereq 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)


Psy 3302f. Personality. (SS; 4 cr; prereq 1051 or 1101-1102, Stat 1601 or 2601) Nature of personality constructs and theories. Conscious vs. nonconscious processes; emotion and motivation; nature and measurement of personal traits; their dimensional structure, stability, development, and heritability.

Psy 3313s. Psychopathology. (SS; 4 cr; prereq 3301 or 3311 or 3302, Stat 1601 or 2601) Psychological disorders and their treatment, including anxiety, personality, affective, schizophrenic, and other recognized disorders of children and adults.

Psy 3401f. Developmental Psychology I: Child Psychology. (SS; 4 cr; prereq 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; prereq 1051 or 1101-1102 and either 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; prereq 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; prereq 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; prereq 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 401lf.s. Helping Relationships. (SS; 4 cr; prereq 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 4640f. Empirical Investigations in Developmental Psychology. (SS; 4 cr; repeatable; prereq 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; prereq 3501 or #) Seminar instruction on topics of student and staff interests. Students will complete an empirical project and paper. Includes lab.

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.”

Soc 2101f. Prejudice, Discrimination, and Systems of Oppression. (HDiv; 4 cr; prereq 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; prereq 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; prereq 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.
Division Structure and Course Descriptions

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; prereq 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; prereq 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; prereq 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; prereq 1101 or Anth 1111; offered when feasible)
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 3250s, Variable Topics in Social Structure. (See specific topics for general education categories; 4 cr; repeatable when topic changes; prereq 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; prereq 1101 or Anth 1111)

Soc 3252s. Women in Muslim Society. (IP; 4 cr; prereq 1101 or Anth 1111)

Soc 3300s. Variable Topics in Area Studies. (IP; 4 cr; repeatable when topic changes; prereq 1101 or Anth 1111) 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; prereq 1101 or Anth 1111)

Spch 1061f. Interpersonal Communication. (SS; 4 cr; not offered 2002-03)
Study of basic theory and practice of interpersonal communication in a variety of contexts.

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; prereq 2101 or #)
Detailed study of the theoretical tradition of human communication. Focuses on social scientific and humanities theories used to explain social interaction. Provides general foundation on various traditions of inquiry as well as qualitative and quantitative methods.

Soc 3411f. Intercultural Communication Theory and Research. (HDiv; 4 cr; prereq 2101 or #)
Study of intercultural communication from an interpersonal and group perspective.

Soc 3421s. Organizational Communication Theory and Research. (SS; 4 cr; prereq 2101 or #)
Study of organizational communication, including small group perspectives.

WSS 1051f. 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 multidisciplinary liberal arts-based program that allows students to enter the field of management as a professional or proceed to graduate studies.

Objectives—The management curriculum focuses on those areas of human knowledge that concern the operation and control of business and nonprofit organizations. In addition to developing competence in analytical and core business areas, students majoring in the field are expected to learn to critically examine business and other institutions from a liberal arts perspective. Specifically, 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 between management and other liberal arts disciplines.

Requirements for a major include analytical, core, and requirements from a chosen area of emphasis.
Major Requirements

Analytical Skills
Stat 1601—Introduction to Statistics or Stat 2601—Statistical Methods

Core Requirements
Econ 1111—Principles of Microeconomics
Econ 1112—Principles of Macroeconomics
Mgmt 2101-2102—Principles of Accounting I-II
Econ 490x—Variable Topics in Economic Research
8 credits in Mgmt courses at the 3xxx level or above, exclusive of those used to satisfy emphasis requirements
8 additional credits in Mgmt or Econ courses at the 3xxx level or above, exclusive of those used to satisfy emphasis requirements
No more than 4 credits from each of the following can be applied to the major:
Econ 490x—Variable Topics in Economic Research
Mgmt x993—Directed Study

Emphasis Requirements
Students must complete the requirements from one of the following areas of emphasis:

I. Financial Management
Math 1101—Calculus I
Spch 1051—Introduction to Public Speaking
or Spch 1000—Variable Topics in Introduction to Public Speaking
Mgmt 3101—Financial Management
At least 8 credits from Mgmt 3133, 4101, 46xx, Econ 3113, 4131, 4131H

II. Global Business
Mgmt 3601—Transnational Enterprise
8 credits of Fren, Ger, Span or other approved language at the 2xxx level or above
4 credits of coursework other than Econ or Mgmt at the 3xxx level and above that carries the IP general education designation
At least 8 credits from Econ 3131, 3141, 3142, 4121, 4121H, 4131, 4131H, Mgmt 45xx
Grades of D in Mgmt 2101-2102, Econ 1111-1112, Math 1101, or Stat 1601 may not be used to meet major requirements. Up to 4 credits of other management 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 Mgmt 2101-2102, Econ 1111-1112, Math 1101, and Stat 1601 or their equivalents during their first two years. Students intending on going to graduate school are strongly recommended to take Math 1101-1102. Students are also recommended to take Phil 2112—Professional Ethics. 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
Econ 1111—Principles of Microeconomics
Econ 1112—Principles of Macroeconomics
10 additional credits in Mgmt courses at the 3xxx level or above
No more than 4 credits from each of the following can be applied to the minor:
Econ 490x—Variable Topics in Economic Research
Mgmt x993—Directed Study
Grades of D in Mgmt 2101-2102, Econ 1111-1112, or Stat 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 business 5-12 should refer to the Education, Secondary (SeEd) section of this catalog.

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

Mgmt 3101f. Financial Management. (SS; 4 cr; prereq 2102; Econ 1111, 1112, Stat 1601)
Financial analysis, theory and practice, financial leverage, capital budgeting, cost of capital, dividend policy, capital market theory, and working capital management.

Mgmt 3133f. Managerial Accounting. (4 cr; prereq 2102)
Managerial accounting is designed to help managers assess needed information to carry out three essential functions in an organization: planning operations, controlling activities, and making decisions. The emphasis of this course is placed on cost behaviors, various product costing methods, cost-volume-profit relationships, budgeting and control through standard costs, and other quantitative techniques used by management.

Mgmt 3141. Business Law I. (SS; 2 cr; prereq 2102; 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; prereq 2102; offered when feasible)
Law as it relates to the commercial world, including the legal environment, commercial paper, corporations, secured transactions, bankruptcy, anti-trust law, and selected employment statutes.

Mgmt 3151. Human Resources Management I. (E/CR; 2 cr; prereq 2101 or #; offered when feasible)
Topics in human resource management: legal issues, planning, recruitment, selection, and training.

Mgmt 3152. Human Resources Management II. (HDiv; 2 cr; prereq 2101 or #; offered when feasible)
Topics in human resource management: evaluating employee performance, compensation and benefits, safety, labor relations, international human resource management.

Mgmt 3161s. Labor Management Relations I. (E/CR; 2 cr; prereq Econ 1111 or #; not offered 2001-02)
Historical development of labor relations and the legal framework governing collective bargaining. Labor relations law reform. Case studies from labor relations law.

Mgmt 3162s. Labor Management Relations II. (SS; 2 cr; prereq 3161 or #; not offered 2001-02)
Issues in labor-management negotiation, grievances, wages and economic security plans, public policies toward collective bargaining. Case studies from labor arbitration.

Mgmt 3201s. Marketing Principles and Strategy. (SS; 4 cr; prereq 2102, Stat 1601 or #; offered when feasible)
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 3221f. Management and Organization Theory. (SS; 4 cr; prereq 2101, Econ 1101 or #)

Mgmt 3301s. Management Science. (M/SR; 4 cr; prereq 2102, Stat 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 3501s. Applied Deterministic Modeling for Management Science. (2 cr; prereq 2102, Math 1101 or Stat 1601 or Stat 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 3502s. Applied Probabilistic Modeling for Management Science. (2 cr; prereq 2102, Math 1101 or Stat 1601 or Stat 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. Queuing 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.

Mgmt 3601f. Transnational Enterprise. (IP; 2 cr; prereq 2102, Econ 1111, Econ 1112 or #)
Development and transformation of business enterprise within the global economy. Includes the basic impact of structural, institutional, and organizational change upon the dynamics of the firm and industry in the contemporary hyper-competitive, technology-driven, fast-paced, global environment.

Mgmt 4101s. Investment and Portfolio Analysis. (SS; 4 cr; prereq 2101, 2102, 3101)
Economic and investment environment as it relates to security investment decisions. Includes analysis of stocks, bonds, real assets, and derivative securities as well as portfolio theory and efficient market theory.

Mgmt 4200. Variable Topics in Managerial Economics. (SS; 2-4 cr; repeatable when topic changes; prereq 2101, Econ 1111, Econ 1112, Math 1101, Stat 1601 or #; offered when feasible)
Topic to be announced.

Mgmt 4500. Variable Topics in Global Business. (IP; 2-4 cr; repeatable when topic changes; prereq 3601 or #)
Epochal changes surrounding structure, institutional dynamics, and organizational adaptation/challenges of global business. Possible topics: globalization process, skill formation and technological change, labor relations, oil and energy, child labor, environmental standards, financial crises, sweatshops, competitive struggle/strategy, business ethics.

Mgmt 4600. Variable Topics in Finance. (SS; 2-4 cr; repeatable when topic changes; prereq 3101 or #; offered when feasible)
Topic to be announced.

Mgmt 4896. Internship. (1-4 cr; repeatable to 4 cr; 2 cr may be applied toward major or minor; prereq 2102; S-N only)
Supervised educational experience and field application relevant to student’s major. Written analysis appropriate to the application is required.

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

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: by teaching mathematics and its processes, by research in mathematics and mathematical 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 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 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 curriculum is designed to help students develop competence in mathematical 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 curriculum prepares students to enter graduate school, pursue careers in applied mathematics, or teach mathematics.

The discipline uses various assessment methods and tools to evaluate and improve student academic achievement in mathematics. 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 2301—Mathematical Perspectives
Math 3221—Analysis
Math 3231—Abstract Algebra I
Math 4901—Senior Seminar
Stat 2611—Mathematical Statistics
one course numbered Math x4xx
a minimum of 9 additional credits in Math or Stat courses at the level 2xxx 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 II
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
Division Structure and Course Descriptions

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

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 designing their area of concentration in applied mathematics 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, or Stat 2611

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 seeking teaching licensure in mathematics 5-12 should refer to the Education, Secondary (SeEd) section of this catalog.

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

Math 1011f. Pre-Calculus. (4 cr; prereq 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; prereq 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; prereq 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; prereq 1101)

Math 2101f.s. Calculus III. (M/SR; 4 cr; prereq 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; prereq 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 2211f. History of Mathematics. (4 cr; prereq Math course above 1100 or #; not offered 2001-02)
Historical development of various areas in mathematics and important figures in mathematics from ancient to modern times.

Math 2301s. Mathematical Perspectives. (M/SR; 4 cr; prereq 1101)
Introduction to the methodology and subject matter of modern mathematics. Sets, functions, relations, cardinality, and induction. The axiomatic method: definitions and examples of graphs, metric spaces, groups and rings. Roots of complex polynomials. Other selected topics.

Math 2401f. Differential Equations. (M/SR; 4 cr; prereq 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; prereq 1101 or #)
Math 3211f. Geometry. (M/SR; 4 cr; prereq Math course above 1100; not offered 2002-03) Synthetic approach to Euclidean and non-Euclidean geometries. Selected topics from affine, hyperbolic, spherical, projective geometries. Possible comparisons of analytic and synthetic approaches. May include other related topics or use of computer software for geometry.

Math 3221f. Analysis. (M/SR; 4 cr; prereq 1102, 2301 or #) Introduction to real and complex analysis. The main topics of calculus—convergence, continuity, differentiation, integration, and series—applied and extended in advanced settings. Emphasis on precise statements and rigorous proofs. Selected applications to other sciences.

Math 3231s. Abstract Algebra I. (M/SR; 4 cr; prereq 2111, 2301 or #) Systematic study of groups and rings, making use of linear algebra. Groups as codifying symmetry throughout mathematics and its applications. The Euclidean algorithm and its consequences, both for integers and polynomials. Other selected topics and applications.

Math 3401s. Operations Research. (M/SR; 4 cr; prereq 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 3411f. Discrete and Combinatorial Mathematics. (M/SR; 4 cr; prereq 1100 or higher or #) Propositional logic; equivalence relations; recurrence equations; structures and properties of undirected and directed graphs; applications of the aforementioned topics.

Math 3501s. Applied Deterministic Modeling for Management Science. (2 cr; prereq 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 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.

Math 3502s. Applied Probabilistic Modeling for Management Science. (2 cr; prereq 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 4201s. Complex Analysis. (M/SR; 2 cr; prereq 3221 or #; not offered 2002-03) Differentiable and analytic functions of a complex variable. Contour integral theorems. Laurent expansions. Other topics optional.

Math 4211f. Real Analysis. (M/SR; 2 cr; prereq 3221 or #; not offered 2001-02) The extension of the theory of integration to other forms of integrals. Metric spaces and functions defined on these. Other optional topics.

Math 4221s. Topology. (M/SR; 2 cr; prereq 2301 or #; not offered 2002-03) Selected topics from point set topology and/or algebraic topology.

Math 4231f. Abstract Algebra II. (M/SR; 2 cr; prereq 3231 or #; not offered 2001-02) Selected topics from the theory of finite groups, Galois theory of fields, and/or the theory of rings.

Math 4241f. Number Theory. (M/SR; 2 cr; prereq 2301 or #; not offered 2002-03) 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; prereq #; offered when feasible) Treatment of an advanced pure mathematics topic not included in the regular curriculum.

Math 4401s. Numerical Methods With Applications in Mathematical Modeling. (M/SR; 4 cr; prereq 2111, 2401 or #; not offered 2001-02) Finite differences; interpolation; numerical integration; numerical solutions of differential, algebraic, and transcendental equations; continuous mathematical models.

Math 4450s. Variable Topics in Applied Mathematics. (M/SR; 4 cr; repeatable when topic changes; prereq #; not offered 2002-03) Treatment of advanced applied mathematics not included in the regular curriculum.

Math 4901f. Senior Seminar. (M/SR; 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 1993f,s, 2993f,s, 3993f,s, 4993f,s. Directed Study. (1-5 cr; repeatable; prereq #)

Math 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.”

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.
**Division Structure and Course Descriptions**

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

#### 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

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
- Piano proficiency

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 requirements. Required courses may not be taken S-N except where noted.

### Teacher Preparation Requirements

Students seeking teaching licensure in instrumental music K-12 or vocal music K-12 should refer to the Education, Secondary (SeEd) section of this catalog.

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### Course Descriptions

**Mus 0100, 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 1041. Introduction to Music.** (FA; 4 cr)

Survey emphasizing development of an intelligent understanding and appreciation of music. For non-music majors.

**Mus 1042s. Fundamentals of Music.** (FA; 4 cr; not offered 2002-03)

The rudiments of music including note and rhythmic reading, scales, chords, beginning chord progressions, and practical keyboard work in the music theory lab.

**Mus 1043. American Jazz Styles.** (FA; 4 cr; offered when feasible)

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 1044, 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 1050, s. Accompanying.** (ArtP; 1 cr; repeatable to 8 cr; prereq #; S-N only)

Students who accompany private lessons and recitalists may receive credit. Accompanying assignments are made through consultation with the piano faculty.

**Mus 1070, 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 1080, s. Jazz Combo.** (ArtP; 1 cr; repeatable to 8 cr; prereq #)

Performance of instrumental jazz music with emphasis on improvisation.

**Mus 1090, 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.** (4 cr)

First course in a series of four. Basic harmonic techniques, initial analysis of scores, and introduction to four-part writing. Must have adequate skills in grand staff reading at the start of the course. Computer software used throughout the series in the music theory lab.

**Mus 1102s. Core Studies I: Music Theory II.** (4 cr; prereq 1101)

Harmonic progression and modulation, seventh chords, secondary dominants and sevenths, analysis of scores with attention to two- and three-part forms.
Mus 1200-1220fs. 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 1200 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 1220. Recorder

Mus 1300fs. 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 1310fs. University Choir. (ArtP; 1 cr; repeatable to 8 cr; 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 1320fs. 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 1330fs. Jazz Ensemble. (ArtP; 1 cr; repeatable to 8 cr; S-N only)
Rehearsals and concerts cover the literature for this medium.

Mus 1340fs. Orchestra. (ArtP; 1 cr)
The study and preparation of standard orchestral works for performance at several public concerts and appearances each semester in addition to a concert tour. The study of basic orchestral procedure.

Mus 2101f. Core Studies II: Music Theory III. (4 cr; prereq 1102)
Chromatic harmony of the Classical Period; borrowed chords, Neapolitan and augmented sixths; harmonic and formal analysis of scores including variation, sonata, and rondo forms.

Mus 2102s. Core Studies II: Music Theory IV. (4 cr; prereq 2101)
Extended chromatic harmony of the Romantic and later eras; ninth, eleventh, and thirteenth chords; altered dominants and chromatic mediants; analysis of scores including nonfunctional harmony and twelve-tone techniques.

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

Mus 3200-3220fs. 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 2002-03)
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 2002-03)
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 3303fs. Instrumental Techniques—Strings. (1 cr; not offered 2002-03)
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 2002-03)
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; prereq 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; prereq 3311)
Specialization of choral conducting and a survey of ensemble materials for various levels of ability and maturity.
Mus 3400s. Opera Workshop. (ArtP; 1 cr; repeatable to 4 cr; prereq #) Practical introduction to opera performance. Students become familiar with a number of operas and musical comedies and perform selections emphasizing ensemble work.

Mus 3500f,s. Composition. (1-4 cr; repeatable; prereq 1101, #) Original work guided on an individual basis.

Mus 3993f,s. Directed Study. (1-5 cr; repeatable; prereq #) Additional tuition required; course not included in UMM tuition band; subject to minimum enrollment requirement.

Mus 4101s. Form and Analysis. (4 cr; prereq 1102; not offered 2001-02) Analysis of musical forms, including harmonic and melodic structure of the phrase, the binary principle, the ternary principle, sonata allegro, rondo, and later alterations of the forms.

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.”

Continuing Education Courses

Mus 3051. CE: Piano Pedagogy I. (ArtP; 2 cr; prereq 1200 or #; additional tuition required; course not included in UMM tuition band; subject to minimum enrollment requirement) 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 pieces 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. CE: Piano Pedagogy II. (ArtP; 2 cr; prereq 1200 or #; additional tuition required; course not included in UMM tuition band; subject to minimum enrollment requirement) 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.


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—Introduction to the Philosophy of Religion
Phil 2111—Introductory Ethics
Phil 2131—Introduction to the Philosophy of Science
Phil 2150—Variable Introductory Topics in Philosophy

any two from:
Phil 3121—Political Philosophy
Phil 3131—Philosophy of Law
Phil 4100—Variable Topics in 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—Variable Topics in Contemporary Issues in Philosophy

any two from:
Phil 3151—History of Ancient Philosophy
Phil 3161—History of Medieval Philosophy
Phil 3171—History of Modern Philosophy
Phil 4000—Variable 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—Introduction to the Philosophy of Religion
Phil 2111—Introductory Ethics
Phil 2131—Introduction to the Philosophy of Science
Phil 2150—Variable Introductory Topics in Philosophy

any one from:
Phil 3121—Political Philosophy
Phil 3131—Philosophy of Law
Phil 4100—Variable Topics in 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—Variable Topics in Contemporary Issues in Philosophy

any one from:
Phil 3151—History of Ancient Philosophy
Phil 3161—History of Medieval Philosophy
Phil 3171—History of Modern Philosophy
Phil 4000—Variable Topics in the History of Philosophy

Course Descriptions

Phil 1101. Introduction to Philosophy. (Hum; 4 cr; offered spring 2002, 2003)
An introduction to fundamental philosophical problems, in areas such as metaphysics (what exists?), epistemology (what can we know? and how can we know it?), and ethics (what actions are moral and immoral? and what is the good life?), with an emphasis on developing the reading, writing, and analytical skills required for philosophical investigation.

Phil 1111. Philosophical Skills. (Hum; 4 cr; offered fall 2002)
This is a course in reasoning in which analytical skills for philosophical inquiry are developed. Emphasis on modal properties such as impossibility and necessity; modal relations like implication and consistency; and philosophical fallacies such as question-begging and circularity.

Phil 1121. Introduction to the Philosophy of Religion. (HDiv; 4 cr; offered spring 2002)
An introduction to fundamental philosophical questions concerning religion, such as the notion of divinity, the possibility of proving the existence of a divinity, the relationship between faith and reason, etc. Views belonging to distinct religious traditions as well as to different gender, racial, and social perspectives will be discussed.

Phil 2101f. Introduction to Symbolic Logic. (M/SR; 4 cr)
An introduction to formal or deductive logic, including basic concepts of logical argumentation; Aristotelian logic; and symbolic translations, truth tables, and theory of deduction. Samples from political speeches, philosophical essays as well as original LSAT questions are analyzed.

Phil 2111f. Introductory Ethics. (Hum; 4 cr; offered fall 2002)
An introduction to philosophical accounts of what makes right acts right and wrong acts wrong, issues involving the concept of goodness, and arguments or debates about moral responsibility.

Phil 2112s. Professional Ethics. (E/CR; 4 cr; offered spring 2002)
A critical examination of moral issues that arise in our professions. Possible topics include affirmative action, autonomy in the workplace, ethical issues in advertising, corporate responsibility, coercive wage offers, distributive justice, and sexual harassment.

Phil 2131s. Introduction to the Philosophy of Science. (HDiv; 4 cr; offered spring 2003)
An introduction to modern philosophical discussion concerning the nature of science. Topics cover the basic concepts and logic of scientific inquiry, 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 Introductory Topics in Philosophy. (Hum; 4 cr; offered fall 2001, spring 2003)
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.
Division Structure and Course Descriptions

Phil 3101. Metaphysics. (Hum; 4 cr; prereq any 1xxx or 2xxx course except 2101; offered spring 2003)
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 3121f. Political Philosophy. (SS; 4 cr; prereq any 1xxx or 2xxx course except 2101; offered fall 2001)
Explores fundamental issues in political philosophy (e.g., political authority; distributive justice; nature, origin, and justification of the state; natural and civil rights) by, among other things, an examination of the works of philosophers such as Plato, Hobbes, Mill, and Rawls.

Phil 3131. Philosophy of Law. (Hum; 4 cr; prereq any 1xxx or 2xxx course except 2101; offered spring 2003)
Critical examination of theoretical and practical normative issues in the philosophy of law (e.g., nature of law, justification of punishment, plea bargaining, legal and moral responsibility, and civil disobedience).

Phil 3141. The Theory of Knowledge. (Hum; 4 cr; prereq any 1xxx or 2xxx course except 2101; offered spring 2002)
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 3151. History of Ancient Philosophy. (Hist; 4 cr; prereq any 1xxx or 2xxx course except 2101)
Explore the views of philosophers such as Plato, Aristotle, Epicurus, and the Stoics. Possible topics include ancient views on the nature and possibility of knowledge, the relationship of the soul to the body, and what the good life is for a human being.

Phil 3161. History of Medieval Philosophy. (Hist; 4 cr; prereq any 1xxx or 2xxx course except 2101)
Explore views of philosophers such as Augustine, Boethius, Anselm, Bonaventure, Aquinas, and Ockham. Possible topics include the relationship between faith and reason, the problem of God’s foreknowledge and human freedom, and proofs for God’s existence.

Phil 3171. History of Modern Philosophy. (Hist; 4 cr; prereq any 1xxx or 2xxx course except 2101)
Explore views of philosophers such as Descartes, Leibniz, Berkeley, Hume, and Kant. Possible topics include the relationship of the mind to the body, and whether and how it is possible to have knowledge of the external world.

Phil 4000f. Variable Topics in the History of Philosophy. (Hist; 4 cr; repeatable when topic changes; prereq any 1xxx or 2xxx course except 2101; offered fall 2002)
Intensive investigation of a particular philosophical problem, area, or work of a philosopher. Topics vary.

Phil 4100f. Variable Topics in Moral Issues and Theories. (Hum; 4 cr; repeatable when topic changes; prereq any 1xxx or 2xxx course except 2101; offered fall 2001)
Intensive investigation of a particular problem, area, issue, or theory in moral philosophy. Possible topics include moral responsibility, autonomy, weakness of will, and self-deception. Topics vary.

Phil 4111s. Ethical Theory. (Hum; 4 cr; prereq any 1xxx or 2xxx course except 2101; offered spring 2003)
This course in metaethics focuses on the nature of moral obligation. Topics include: Can moral obligations change with the passage of time? Are genuine moral dilemmas possible? Does “ought” imply “can”? Is moral obligation overriding? Is there a genuine distinction between “subjective” and “objective” moral obligation?

Phil 4121s. Philosophy of Language. (Hum; 4 cr; prereq any 1xxx or 2xxx course except 2101; offered fall 2002)
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 to 8 cr; prereq any 1xxx or 2xxx course except 2101; offered spring 2002)
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 4901. Senior Philosophical Defense. (1 cr)
Writing and defending a senior philosophical thesis is the culminating experience for UMM philosophy majors. Majors develop a piece of their philosophical writing, producing multiple drafts in response to comments from a variety of philosophical viewpoints, and then orally defend their thesis.

Phil 1993f,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.”

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 3101—Classical Mechanics

Phys 3401—Experimental Physics

Phys 4101—Electromagnetism

Phys 4201—Quantum Mechanics

One additional four credit course numbered Phys 3xxx or 4xxx

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

Math 2401—Differential Equations

Required courses may not be taken S-N. The GPA in these courses must be at least 2.50.

**Teacher Preparation Requirements**

Students seeking teaching licensure in physics 5-12 should refer to the Education, Secondary (SeEd) section of this catalog.

**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; prereq Math 1101 or #)

Vectors, kinematics, laws of motion, circular motion, work-energy theorem, conservation principles, rotational motion, gravitation, simple harmonic oscillations, wave phenomena, fluid mechanics, thermal properties of matter, kinetic theory, laws of thermodynamics. (4 hrs lect and rec, 2 hrs lab)

**Phys 1102f. General Physics II.** (Sci-L; 5 cr; prereq 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; prereq 1102, Math 2401 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; prereq 1102 or #)

DC and AC circuits, pulses and Fourier analysis, semiconductor physics, p-n junctions, diodes, transistors, amplifiers, feedback, oscillators, operational amplifiers. (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, electronics, laser physics, physics of fluids, plasma physics, superfluidity and superconductivity, solid state physics, spectra of atoms and molecules.

**Phys 3101f. Classical Mechanics.** (Sci-L; 4 cr; prereq 2101, Math 2101 or #; not offered 2001-02)

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; prereq Math 2101; offered when feasible)

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; prereq 2101; not offered 2002-03)

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; prereq 2101)

An introduction to modern experimental methods. (3 hrs lect, 3 hrs lab)
Phys 3501s. Statistical Physics. (Sci; 4 cr; prereq 2101; not offered 2001-02)
Probability distributions, statistical ensembles, statistical thermodynamics, ideal gases, quantum statistics, kinetic theory of transport phenomena. (4 hrs lect)

Phys 4101f. Electromagnetism. (Sci; 4 cr; prereq 2101, Math 2101 or #; not offered 2002-03)
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; prereq 2101, Math 2101)
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)
Capstone experience in physics. Investigation of a selected topic of current interest in physics. Presentation of results 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

Major requirements include a minimum of 36 credits taken within the political science discipline, as well as either Stat 1601 or Stat 2601. Courses taken within political science must include:

Pol 1101—Introduction to Political Science
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 1301—Comparative Politics
or 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.

Students are strongly encouraged to take lower division courses in each of the four subfields. In addition, 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 social studies 5-12 should refer to the Education, Secondary (SeEd) section of this catalog.

Course Descriptions
Pol 1101f. Introduction to Political Science. (E/CR; 4 cr)
Origins and development of politics and government. Survey of contemporary political institutions and behavior. Major perennial questions are investigated at length and in depth. Critical thinking and class discussion provide the focus of the course.

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 1301s. Comparative Politics. (IP; 4 cr)
Examines the nature of political authority, experience of social revolution, and achievement of economic transformation in the context of politics and government in selected countries around the world.

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; prereq 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 3101. Political Science Analysis. (SS; 4 cr; prereq Stat 1601 or Stat 2601 or #; not offered 2001-02)
Techniques commonly used in the systematic study of politics. Topics include the use of multivariate regression in political science, the assumptions of the linear model, regression diagnostics, and appropriate corrections. Optional topics include logistic regression, time series analysis, factor analysis, survey methodology, and/or game theory.

Pol 3201f. Legislative Process. (SS; 4 cr; prereq 1201 or #)
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; prereq 1201 or #; not offered 2002-03)
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; prereq 1201 or #; not offered 2002-03)
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; prereq 1201 or #; not offered 2002-03)
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; prereq 1201 or #; not offered 2001-02)
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 3241s. Political Parties and Interest Groups. (SS; 4 cr; prereq 1201 or #; not offered 2001-02)
Organization, operation, and development of political parties and interest groups in the United States.

Pol 3251s. Political Participation and Voting Behavior. (SS; 4 cr; prereq 1201 or #; not offered 2001-02)
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; prereq 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; prereq 1201 or #; not offered 2001-02)
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.
Division Structure and Course Descriptions

Pol 3262f. Minorities and Public Policy. (HDiv; 4 cr; prereq 1201 or #) Analysis of the ways race, ethnicity, and other factors shape political engagement; their implications for public policy and the policy process.

Pol 3263s. Political Psychology. (SS; 4 cr; prereq 1201; Psy 1051 or # recommended; not offered 2002-03) 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; prereq 1201 or #; not offered 2001-02) 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 3264Hs. Honors: American Political Culture. (Hist; 4 cr; prereq 1201 or #, # for students not in Honors Program; not offered 2001-02) 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 3301s. Contemporary Political Ideologies. (Hum; 4 cr; prereq 1101 or #) 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; prereq 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; prereq 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; prereq 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; prereq 1101 or #) Development of the American political tradition from the Puritan theocracy to recent phases of American political life.

Pol 3401f. U.S. Foreign Policy. (SS; 4 cr; prereq 1401 or #; not offered 2002-03) 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; prereq 1401 or #; offered when feasible) 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; prereq 1401 or #) 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; prereq 1401 or #) Advanced topics in international relations, such as comparative foreign policy and international relations theory.

Pol 3451f. Comparative Foreign Policy. (IP; 4 cr; prereq 1401 or #) 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; prereq 1401 or #; offered when feasible) 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 3453s. Russian Politics and Foreign Policy. (IP; 4 cr; prereq 1401 or #) Domestic and foreign policies of the former Soviet Union from the Bolshevik Revolution to the present. Nature of the Soviet empire, implosion of the Soviet Union, Russian Federalism, democratic and market reforms, ethnic conflicts, nuclear strategy, military policy, and diplomatic style.

Pol 3500s. Variable Topics in Comparative Politics. (See specific topics for general education categories; 4 cr; repeatable when topic changes; prereq 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; prereq 1101 or #) 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 3502f. Government and Politics of Europe. (SS; 4 cr; prereq 1101 or #; not offered 2001-02) The comparative study of contemporary government/politics in Europe. Emphasizes influence of economic, cultural, and other factors. Parties, bureaucracy, legislatures, executives: way in which they reflect and contribute to political life.

Pol 3503s. Women in Politics Worldwide. (IP; 4 cr; prereq 1201, 2101 or #; not offered 2002-03) 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 3504s. Latin American Politics. (IP; 4 cr; prereq 1301 or #) A comparative examination of central issues in and components of Latin American political life, including economic development, regimes and alliances, guerrilla wars, the armed forces, human rights, and democratic consolidation. Countries may include Argentina, Brazil, Chile, Columbia, El Salvador, and Cuba.

Pol 3505f. Military and Political Development. (IP; 4 cr; prereq 1301 or #; not offered 2001-02) Explores military intervention in government and the influence of the military on social and economic policies in a variety of regions.

Pol 3506f. Government and Politics of Africa. (IP; 4 cr; prereq 1301 or #) Comparative study of government and politics of contemporary Africa, with special attention to state/society relations, interaction of politics and economic development, political institutions, and conflict.

Pol 3507s. Political Violence. (IP; 4 cr; prereq 1301 or #) Examination of causes, processes, and outcomes of violent social conflict, including repression, mass political protests, riot revolt, terrorism, and revolution.

Pol 3996s, 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 4994s, 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
Stat 1601—Introduction to Statistics
or Stat 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—Sensation and Perception
Psy 3112—Cognition
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:
Division Structure and Course Descriptions

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:
Stat 1601—Introduction to Statistics
or
Stat 2601—Statistical Methods
Psy 3601—Quantitative Methods in Psychology also entails extensive computer use, though it is not required for the major.

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

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

Minor Requirements

Psy 1101-1102—Foundations of Psychology I-II
Stat 1601—Introduction to Statistics
or Stat 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—Sensation and Perception
Psy 3112—Cognition
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 teaching licensure in social studies 5-12 should refer to the Education, Secondary (SeEd) section of this catalog.

Course Descriptions

Psy 1051f. Introduction to Psychology. (SS; 4 cr)
An introduction to the science of mind and behavior. Does not count toward the requirements of the psychology major or minor 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; prereq 1051 or both 1101, 1102 or #)
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. Designed for students aiming for teacher certification, who receive priority in registration. Does not count for elective credit for the 16-credit psychology component of the LAHS major or for the psychology major or minor. A more in-depth alternative to this course is Psy 3401 and Psy 3402. Students double majoring in education and psychology should consider the Psy 3401 and 3402 alternative to this course.

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 research methods and lab. Designed for psychology majors, minors, and others intending concentrated study in psychology.

Psy 1102f. Foundations of Psychology II. (SS; 4 cr; prereq Stat 1601 or Stat 2601)
Complex human behavior and development: development across the life span, social psychology, emotion and motivation, personality, psychopathology, psychology of health, and psychological interventions. Includes research methods and lab. Designed for psychology majors, minors, and others intending concentrated study in psychology.

Psy 3051s. The Psychology of Women. (HDIV; 4 cr; not offered 2001-02)
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 3101s. Learning Theory and Behavior Modification. (SS; 4 cr; prereq 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. Sensation and Perception. (SS; 4 cr; prereq 1101, Stat 1601 or Stat 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. (SS; 4 cr; prereq 1101, Stat 1601 or Stat 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; prereq 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 3211f. Biological Psychology. (Sci-L; 5 cr; prereq 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)

Psy 3221f. Behavioral Biology of Women. (Sci; 2 cr; not offered 2001-02)
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 3221Hf. Honors: Behavioral Biology of Women. (Sci; 2 cr; prereq # for students not in Honors Program; not offered 2001-02)
Same as 3221. 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 3302f. Personality. (SS; 4 cr; prereq 1051 or 1101-1102, Stat 1601 or 2601)
Nature of personality constructs and theories. Conscious vs. nonconscious processes; emotion and motivation; nature and measurement of personal traits; their dimensional structure, stability, development, and heritability.

Psy 3313s. Psychopathology. (SS; 4 cr; prereq 3301 or 3311 or 3302, Stat 1601 or 2601)
Psychological disorders and their treatment, including anxiety, personality, affective, schizophrenic, and other recognized disorders of children and adults.

Psy 3401f. Developmental Psychology I: Child Psychology. (SS; 4 cr; prereq 1051 or 1101-1102)
Theory, data, and research in development from conception to infancy. 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; prereq 1051 or 1101-1102 and either 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; prereq 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; prereq 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; prereq 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.
Ps 3601s. Quantitative Methods in Psychology. (M/SR; 4 cr; prereq 1101-1102, Stat 1601 or Stat 2601) Intermediate course in research design and data analysis. Analysis of variance, regression and correlation, non-parametric methods, use of microcomputer statistical packages.

Ps 3611s. History and Philosophy of Psychology. (Hist; 2 cr; not offered 2002-03) 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.

Ps 4101f,s. Helping Relationships. (SS; 4 cr; prereq 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.

Ps 4610f. Empirical Investigations in Cognitive Psychology. (SS; 4 cr; repeatable; prereq 3111 or 3112) Empirical investigations by students in any area covered by Cognitive Psychology I and II, as well as related areas. Includes lab.

Ps 4620f. Empirical Investigations in Biological Psychology. (Sci; 4 cr; repeatable; prereq 3211) Empirical investigations by students in any area covered by Biological Psychology, as well as related areas. Includes lab.


Ps 4640f. Empirical Investigations in Developmental Psychology. (SS; 4 cr; repeatable; prereq 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.

Ps 4650f. Empirical Investigations in Social Psychology. (SS; 4 cr; repeatable; prereq 3501 or #) Seminar instruction on topics of student and staff interests. Students will complete an empirical project and paper. Includes lab.

Ps 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; prereq #, 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.

Ps 1993f,s, 2993f,s, 3993f,s, 4993f,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.

Ps 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.”

**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**

Russ 1001f. Beginning Russian I. (FL; 4 cr; not offered 2001-02) 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.

Russ 1002s. Beginning Russian II. (FL; 4 cr; prereq 1001 or placement or #; not offered 2001-02) 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:

- Anth 1111—Introductory Cultural Anthropology
- Econ 1112—Principles of Macroeconomics
- 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
- Stat 1601—Introduction to Statistics or equivalent

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.

Teacher Preparation Requirements

Students seeking teaching licensure in social studies 5-12 should refer to the Education, Secondary (SeEd) section of this catalog.

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 1112f,s. Principles of Macroeconomics. (SS; 4 cr; prereq high school algebra or #)
Introduction to basic economic problems, concepts, and theoretical models. Measurement of economic performance; national income, inflation and unemployment; competing macroeconomic theories and stabilizing policies.

Econ 1951f,s. Seminar for Social Science Majors. (1 cr; prereq 1111; 1112; 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 1001f,s. 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.

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.

Stat 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.

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
designated 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

one course from:

- Soc 3401—Classical Sociological Theory
- Soc 3402—Contemporary Sociological Theory

**Minor Requirements**

A sociology minor consists of:

- a minimum of 6 courses (24 credits), including:
  - Soc 1101—Introductory Sociology
  - Soc 3101—Research Methodology I

**Teacher Preparation Requirements**

Students seeking teaching licensure in social studies 5-12 should refer to the Education, Secondary (SeEd) section of this catalog.

**Course Descriptions**

- **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; prereq 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; prereq 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; prereq 1101 or Anth 1111)**

- **Soc 2302s. Women in Latin America. (IP; 4 cr; prereq 1101 or Anth 1111)**

- **Soc 2302Hs. Honors: Women in Latin America. (IP; 4 cr; prereq 1101 or Anth 1111, # for students not in Honors Program)**
  Same as Anth 2302H. In addition to regular coursework, honors students are required to compose one creative research paper and acquire pedagogical skills through leading occasional class discussions.

- **Soc 2451f. 20th-Century Native Americans. (HDIV; 4 cr; prereq 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; prereq 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; prereq 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; not offered 2001-02)**
  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; prereq 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; prereq 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; prereq 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; prereq 1101 or Anth 1111; offered when feasible)**
  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; prereq 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; prereq 1101 or Anth 1111)

Soc 3252s. Women in Muslim Society. (IP; 4 cr; prereq 1101 or Anth 1111)

Soc 3300s. Variable Topics in Area Studies. (IP; 4 cr; repeatable when topic changes; prereq 1101 or Anth 1111)
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; prereq 1101 or Anth 1111)

Soc 3301f. Classical Sociological Theory. (SS; 4 cr; 5 addtl cr in Soc recommended; prereq 1101; 4 addtl cr in Soc recommended)
Survey of major developments in classical sociological theory, with emphasis on the “Big Three”—Marx, Durkheim, and Weber, among others. Emphasis on sociological ideas in relation to the principal intellectual currents of European and American society.

Soc 3302s. Contemporary Sociological Theory. (SS; 4 cr; 5 addtl cr in Soc recommended; prereq 1101; 4 addtl cr in Soc recommended; not offered 2001-02)
Survey of recent developments, trends, and debates in contemporary sociological theory: relationship of contemporary theories to classical theories and to current trends in European, American, and non-Western thought.

Soc 3401f. Classical Sociological Theory. (SS; 4 cr; 5 addtl cr in Soc recommended; prereq 1101; 4 addtl cr in Soc recommended)
Survey of major developments in classical sociological theory, with emphasis on the “Big Three”—Marx, Durkheim, and Weber, among others. Emphasis on sociological ideas in relation to the principal intellectual currents of European and American society.

Soc 3402s. Contemporary Sociological Theory. (SS; 4 cr; 5 addtl cr in Soc recommended; prereq 1101; 4 addtl cr in Soc recommended; not offered 2001-02)
Survey of recent developments, trends, and debates in contemporary sociological theory: relationship of contemporary theories to classical theories and to current trends in European, American, and non-Western thought.

Soc 3411s. Seminar in Anthropological Methodology. (E/CR; 4 cr; prereq 1101 or Anth 1111; 4 addtl cr in Soc or Anth)
Same as Anth 3411. Exploration and evaluation of methods used in cultural anthropology: qualitative methods in sociology and anthropology; research ethics; design and execution of qualitative research project.

Soc 4100. Tutorial in Sociological Theory. (2-4 cr; repeatable to 8 cr; prereq 3401 or 3402; 5 addtl cr in Soc recommended)
Examines specific theorist(s). Topics vary according to student and staff interests and are announced in advance.

Soc 4991s. Independent Project Seminar. (5 cr; prereq 3101, 3401 or 3402)
Seminar to guide sociology majors in the completion of an independent study project; selection, definition, and execution of research project; small-group and one-to-one consultation and advising on defining a research topic, designing and planning its execution, developing a bibliography, relating relevant theoretical perspectives to research materials, organizing and writing a research paper.

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

Soc 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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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
Divisions & Courses

**Span 3301—**Masterpieces of Latin American Literature I
**Span 3302—**Masterpieces of Latin American Literature II
**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 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 minor requirements.

**Teacher Preparation Requirements**

Students seeking teaching licensure in Spanish K-12 should refer to the Education, Secondary (SeEd) section of this catalog.

**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 3101—**Introduction to Spanish Language

an additional literature course
courses in Latin American area studies and a foreign study experience are recommended

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; prereq 1001 or placement or #)*
Second course in the sequence beginning with 1001.

**Span 2001f. Intermediate Spanish I.** *(IP; 4 cr; prereq 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; prereq 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)*
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 Scoia televised presentations and materials.

**Span 3002s. Advanced Spanish II.** *(IP; 4 cr; prereq 3001, ¶3101)*
Second course in the sequence beginning with 3001.

**Span 3101s. Introduction to Spanish Literature.** *(Hum; 4 cr; prereq 3001, ¶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; prereq 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; prereq 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; prereq 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; prereq 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; prereq 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 3500f. Variable Topics in Spanish Peninsular Literature. (Hum; 4 cr, repeatable when topic changes; prereq 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.

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

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

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

**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

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

**Teacher Preparation Requirements**

Students seeking teaching licensure in communication arts and literature 5-12 should refer to the Education, Secondary (SeEd) section of this catalog. Students completing the course requirements for licensure in communication arts and literature earn an English major.

**Course Descriptions**

**Spch 1000f. Variable Topics in Introduction to Public Speaking.** (E/CR; 4 cr; repeatable when topic changes; not open to students who have taken 1051; offered when feasible)

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; not offered 2002-03)

Basic theory and practice of interpersonal communication in a variety of contexts.

**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; prereq 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; prereq 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; prereq 2101 or #; not offered 2001-02)

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; prereq 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; prereq 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; prereq 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; prereq 2101 or #)

Detailed study of the theoretical tradition of human communication. Focuses on social scientific and humanities theories used to explain social interaction. Provides general foundation on various traditions of inquiry as well as qualitative and quantitative methods.

**Spch 3411f. Intercultural Communication Theory and Research.** (HDiv; 4 cr; prereq 2101 or #)

Study of intercultural communication from an interpersonal and group perspective.

**Spch 3421s. Organizational Communication Theory and Research.** (SS; 4 cr; prereq 2101 or #)

Study of organizational communication, including small group perspectives.
Spch 4000. Variable Topics in Speech Communication. (4 cr; repeatable when topic changes; prereq 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 2001-02)
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; prereq 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; prereq 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, 2101, 3101, 3301, 3401, 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 #:)
Spch 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.”

Suggested Requirements for Area of Concentration
(See page 57 for more information on majors and areas of concentration.)
Math 1101-1102—Calculus I-II
Stat 1601—Introduction to Statistics
or Stat 2601—Statistical Methods
Math/Stat 2501—Probability and Stochastic Processes
Stat 2611—Mathematical Statistics
Stat 3601—Data Analysis
Stat 4901—Senior Seminar
8 additional credits in statistics courses:
Stat 3611—Multivariate Statistical Analysis
Stat 4601—Biostatistics
Stat 4652—Variable Topics in Statistics
Stat x993—Directed Study in Statistics
A minimum of 4 credits to be chosen from:
Math 2101—Calculus III
Math 2111—Linear Algebra
Math 2201—Mathematical Perspectives
Math 3201—Analysis
Math 3401—Operations Research
Math 3501—Applied Deterministic Modeling for Management Science
Math 3502—Applied Probabilistic Modeling for Management Science
CSci 1211—Introduction to Problem Solving with Java
CSci 1301—Problem Solving and Algorithm Development I
CSci 1302—Problem Solving and Algorithm Development II
Econ 3501—Introduction to Econometrics
Pol 3101—Political Science Analysis
Psy 3601—Quantitative Methods in Psychology
Soc 3101—Research Methodology I
Soc 3102—Research Methodology II
Other courses with faculty approval
Students planning to pursue graduate work in statistics or biostatistics should complete Math 2101—Calculus III and consider taking Math 2201—Mathematical Perspectives and Math 3211—Analysis for Ph.D. preparation.

Suggested Requirements for Area of Emphasis
(See page 58 for more information on minors and areas of emphasis.)
Stat 1601—Introduction to Statistics
or Stat 2601—Statistical Methods
Stat 3601—Data Analysis
A minimum of 16 additional credits from courses listed in the area of concentration section or approved courses, with at least one course with a Stat designator.

Statistics (Stat)

This discipline is in the Division of Science and Mathematics.

Objectives—The statistics program provides an effective operational knowledge of the theory and methods of statistics and the application of statistical methods in a liberal arts environment. It seeks to enhance students’ critical thinking in making judgments based on data and provides students with the basic knowledge and skills to make contributions to modern society. The curriculum also prepares students to enter graduate school or pursue careers in statistical fields. Students interested in statistics design an area of concentration or emphasis in consultation with statistics faculty.
Course Descriptions

**Stat 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.

**Stat 2501f. Probability and Stochastic Processes. (M/SR; 4 cr; prereq Math 1101 or #)**

**Stat 2601f. Statistical Methods. (M/SR; 4 cr; prereq Math 1101 or Math 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.

**Stat 2611s. Mathematical Statistics. (M/SR; 4 cr; prereq Math 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.

**Stat 3601f. Data Analysis. (M/SR; 4 cr; prereq 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.

**Stat 3611s. Multivariate Statistical Analysis. (M/SR; 4 cr; prereq 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 mean vector, MANOVA. Analysis of covariance structures; principal components, factor analysis. Classification and grouping techniques: discrimination and classification, clustering, use of statistical computer packages.

**Stat 4601s. Biostatistics. (M/SR; 4 cr; prereq 1601 or 2601 or 2611 or #; not offered 2002-03)**
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.

**Stat 4650s. Variable Topics in Statistics. (M/SR; 4 cr; repeatable when topic changes; prereq 1601 or 2601 or 2611 or Math 2601 or Math 2611 or #; not offered 2001-02)**
Topics selected from nonparametric methods, linear and nonlinear regression analysis, ANOVA, design of experiments, sampling methods, time series analysis and statistical computing.

**Stat 4901f. Senior Seminar. (M/SR; 1 cr; prereq sr)**
Full-year course. Required for all students who design a statistics area of concentration. Students must attend year round and present one of the seminars.

**Stat 1993f,s, 2993f,s, 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.”

**Studio Art (ArtS)**
(See Art, Studio.)

**Teacher Education Programs**
(See Education; Education, Elementary; and Education, Secondary.)

**Theatre Arts (Th)**
This discipline is in the Division of the Humanities. The discipline encompasses theatre as an aesthetic 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.

**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**

Students seeking teaching licensure in dance and theatre arts K-12 should refer to the Education, Secondary (SeEd) section of this catalog.

**Course Descriptions**

Th 1040. Backstage on Broadway. (1 cr; repeatable to 4 cr; prereq #: S-N only; offered when feasible)  
Supervised field trip to New York; attending selected professional theatre productions; backstage tours; discussions with theatre professionals.

Th 1050. London Theatre Tour. (1 cr; repeatable to 4 cr; prereq #: S-N only; offered when feasible)  
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; prereq 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; prereq 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; prereq 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; prereq 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 the 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; prereq 2211)
Explores 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.

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; prereq 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; prereq 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; prereq 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; prereq 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 3301a. Stage Lighting. (4 cr; prereq 1301, 2301; not offered 2002-03)
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; prereq 1301, 2301; not offered 2002-03)
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; prereq 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 #)
Projects may be undertaken.

Th 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.”

Wellness and Sport Science (WSS)
This discipline is in the Division of Education.

Objectives—This curriculum helps students develop and maintain a healthy lifestyle and prepares them for athletic training and/or employment as public school athletic coaches.

The statement, “Varsity coaching requirements completed,” is added to the transcript of students who complete:

Coaching
WSS 1101—First Aid
WSS 2102—Human Anatomy
WSS 2111—Kinesiology
WSS 2112—Exercise Physiology
WSS 2121—Prevention and Care of Injuries
WSS 3201—Coaching and Internship
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

**Athletic Training**

*Admission to the Athletic Training Education Program:* During fall semester of the freshman year, students are expected to attend an application meeting to begin the application process. Applications must be submitted to the Athletic Training Education Committee by the end of the fifth week of spring semester for entry to the program fall semester of the sophomore year. Enrollment in the Athletic Training Education Program is limited. The decision to admit is made during the spring semester, before fall registration.

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

**Requirements for admission include the following:**

1. Completed application packet.
2. A minimum cumulative GPA of 2.50.
3. Completed observation experience
4. Approval of the staff based on an interview, recommendations, and assessment of the observation experience.

The statement, “Athletic Training Education Program Completed,” will be added to the transcript of students who are admitted to the program, complete the following coursework:

- WSS 1051—Fitness for Life
- WSS 1052—Societal Issues in Health and Wellness
- WSS 1101—First Aid
- WSS 1200—Variable Topics in Wellness Skills
- WSS 1211—Badminton
- WSS 1213—Golf
- WSS 1214—Racquetball
- WSS 1215—Skating
- WSS 1216—Skiing
- WSS 1219—Strength Training
- WSS 1221—Walking and Jogging
- WSS 3007—Practicum in Athletic Training II
- WSS 4901—Senior Seminar
- Biol 2102—Human Anatomy
- Biol 4102—Human Physiology

and the required practical/observation hours.

Upon completion of the Athletic Training Education Program, students are eligible to sit for the National Athletic Trainers Association Board of Certification Examination.

**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. National Safety Council first aid and 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; 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 1211s. Badminton.** (0.5 cr)
- **WSS 1213f. Golf.** (0.5 cr)
- **WSS 1214f,s. Racquetball.** (0.5 cr)
- **WSS 1215s. Skating.** (0.5 cr; alternates yrs with 1216; special fee required)
- **WSS 1216s. Skiing.** (0.5 cr; alternates yrs with 1215; special fee required)
- **WSS 1219s. Strength Training.** (0.5 cr)
- **WSS 1221f. Walking and Jogging.** (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. (1-2 cr; repeatable when topic changes)
Topic selected annually from issues in wellness studies (e.g., athletic training).

WSS 2001s. Advanced Topics in First Aid. (1 cr)
Lectures, demonstrations, practical work in emergency care, focusing on advanced immobilization, transportation of injured or ill individuals, use of AED, bloodborne pathogens, and oxygen administration. National Safety Council certification is awarded upon successful completion of the course.

WSS 2002s. Pharmacology in Athletic Training. (1 cr)
Legal and illegal drug use. Topics include indications, contraindications, and effects of commonly used non-prescription and prescription medications; ergogenic aids and the use of illegal substances in athletics; neurophysiology and pharmacology as it relates to the effects of drugs on active individuals.

WSS 2003s. Nutrition. (2 cr)
Basic nutrition, fundamentals of digestion, absorption and metabolism, nutrients and their roles, and specific sports/nutrition related subjects.

WSS 2004s. Psychological Aspects of Sports. (2 cr; prereq ¶WSS 2005)
Psychological aspects of physical education, sports, and recreation and the implications this knowledge has for effective teaching, coaching, and athletic training.

WSS 2005s. Sociological Aspects of Sports. (2 cr; prereq ¶WSS 2004)
Sociological aspects of physical education, sports, and recreation and the implications this knowledge has for effective teaching, coaching, and 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; prereq 2102)
Scientific principles of movement and tissue responses to force; analysis of basic movement in sports and other physical activities.

WSS 2112f. Exercise Physiology. (2 cr)
Human physiological adaptations resulting from activity/exercise.

WSS 2121s. Prevention and Care of Injuries. (4 cr; prereq 2111)
Introduction to safety measures, care, prevention, and rehabilitation of injuries in sports and other physical activities. (three 65-min lect, one 65-min lab)

WSS 2201s. Baseball Coaching. (2 cr)
History, psychology, and theory of the game, techniques of coaching each position, rules, batting, practice and game organization, 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, officiating.

WSS 2205s. Track and Field Coaching. (2 cr)
History, psychology, and theory of the sports, 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, practice and meet organization, officiating, rules, strategy, techniques of coaching maneuvers.

WSS 2208f. Soccer Coaching. (2 cr; offered even years)
History, psychology, and theory of the sport, individual techniques, practice and game organization, officiating, rules and strategies.

WSS 3000. Variable Topics in Wellness and Sport Science II. (See specific topics; 1-4 cr; repeatable when topic changes)
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.

WSS 3001f. Advanced Athletic Training. (4 cr; prereq 2121; offered odd years)
Study of neurological, biomechanical, orthopedic, and pathophysiological basis of injury and disease in active individuals. Comparison and application of advanced techniques of evaluation for injury and disease of the spine and upper and lower extremities.

WSS 3002s. Medical Aspects. (4 cr; prereq 2121; offered even years)
Etiology, evaluation, diagnosis, and treatment of medical conditions affecting active individuals, including predispositions; physiological variants; sociological, psychological, race, and gender factors.

WSS 3003f. Rehabilitation of Injury and Disease. (2 cr; prereq 2121 and ¶3004; offered even years)

WSS 3004f. Therapeutic Modalities. (2 cr; prereq 2121, ¶3003; offered even years)
Relationship of the electromagnetic and acoustic spectra to biological tissue response. The pathophysiology of pain and healing. The psychological and ethical implications of therapeutic modalities. Research design and evaluation.
WSS 3005s. Organization and Administration of Athletic Health Care. (4 cr; prereq 2121; offered odd years)
Factors and relationships necessary to achieve organizational objectives: establishment of goals, policies, procedures, planning; organizational structure and behavior; leadership; ethics; and legal aspects.

WSS 3006f,s. Practicum in Athletic Training I. (1 cr; prereq admission to the Athletic Training Education Program)
Principles and practices involved in the field of athletic training. Emphasis is placed on recognition, evaluation, and treatment of injuries to the lower body.

WSS 3007f,s. Practicum in Athletic Training II. (1 cr; prereq admission to the Athletic Training Education Program and WSS 3006)
Principles and practices involved in the field of athletic training. Emphasis is placed on recognition, evaluation, and treatment of injuries to the upper body.

WSS 3201f,s. Coaching Internship. (1 cr; prereq #: S-N only)
Supervised field experience in coaching, consisting of no fewer than 40 hours.

WSS 4901f,s. Senior Seminar. (1 cr; prereq sr in the athletic training education program)
Seminar on selected competencies within the field of athletic training.

WSS 1993f,s, 2993f,s, 3993f,s, 4993f,s. Directed Study. (1-5 cr; repeatable; prereq #)
WSS 4994f,s. Senior Honors Project. (1-5 cr; repeatable; prereq participation in Honors Program, #: S-N only)
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.”

Continuing Education Courses
WSS 1301. CE: Beginning Karate. (0.5 cr; additional tuition required; course not included in UMM tuition band; subject to minimum enrollment requirement; S-N only)
Terminology, fundamentals, basic techniques of blocking, punching and kicking; basic attack and defense strategies.

WSS 1303. CE: Advanced Karate. (0.5 cr; prereq 1301 or #: additional tuition required; course not included in UMM tuition band; subject to minimum enrollment requirement; S-N only)
Continuation of 1301. Detailed instruction in authentic karate technique. Instructor sets groundwork as students begin training for first degree black belt.

WSS 1301. CE: Beginning Modern/Jazz Dance. (ArtP; 1 cr; S-N only)
Practice in the fundamental movement vocabulary and steps of dance as a performance art from the unique perspective of American jazz in combination with the techniques of modern dance. Discussion of the cultural origins of jazz, individual style in dance, and role of dance in contemporary life.

WSS 1332. CE: Intermediate Jazz Dance. (ArtP; 1 cr; prereq #: S-N only)
Builds on basic dance vocabulary with emphasis on the movement vocabulary of jazz dance. Emphasis on African dance roots and stylistic variations in contemporary jazz dance forms.

WSS 1333. CE: Intermediate Modern Dance. (ArtP; 1 cr; prereq #: S-N only)
Builds on basic dance vocabulary with movement exercises from traditional schools of modern dance technique (Wigman/Holm, Graham, Humphrey/Limon, Horton, Cunningham). Emphasis on advancing technical skills through conditioning, improvisation, and performance of movement combinations. Class meets first half of fall semester.

WSS 2301. CE: Dance Production. (ArtP; 1 cr; prereq #: additional tuition required; course not included in UMM tuition band; subject to minimum enrollment requirement; S-N only)
Variety of directed projects in performance and production aspects of dance for the stage, culminating in a public performance. Meets second half of spring semester.

Women’s Studies (WoSt)
This is an interdisciplinary program housed in the Division of the Social Sciences. The program is administered by the coordinator of women’s studies who is a faculty member of any of the four divisions.

Objectives—To explore the history, position, and roles of women as well as the attitudes concerning them and to acquaint students with the changing determinants of women’s situations.

Major Requirements
Minimum of 40 credits to include:
WoSt 1101—Introduction to Women’s Studies
WoSt 1111—Women’s Studies Across the Curriculum
Hist 3700—Variable Topics in the History of Women
Psy 3051—The Psychology of Women

One of the following:
Anth 2302—Women in Latin America
Soc 2101—Prejudice, Discrimination, and Systems of Oppression
Soc 2302—Women in Latin America
Soc 3121—Sociology of Gender
Soc 3200—Variable Topics in Social Stratification
Soc 3252—Women in Muslim Society
An additional 20 credits are to be selected from the courses listed in the course description section below. A course not listed may be applied to the 20-credit requirement with the consent of the instructor and major adviser. Any directed study course for which an instructor is available is acceptable provided the subject matter is appropriate. Appropriate courses incorporate women’s studies theories and/or methodologies.

Students develop a coherent program of study in consultation with their major adviser. Advisers are usually faculty with backgrounds or specialties related to women’s studies. When the program and plan are approved by the adviser, they are forwarded to the coordinator of women’s studies.

The writing component of the general education requirements is fulfilled using WoSt 4xxx courses. The computing component of the general education requirements can be fulfilled by courses that use Web-based research, such as Pol 3503 and Soc 3252.

The major requires two culminating experiences on the part of each student. The first experience can be satisfied in one of two ways. 1) The student may conduct an interdisciplinary seminar open to students and faculty of all disciplines involved (WoSt 4801). 2) The student may take 4 credits of Directed Study (WoSt 4993).

In the second experience, the student should demonstrate learning in women’s studies by reviewing term papers, reports, and other assignments collected in a “women’s studies file.” This file is assembled by the student and registered with the student’s women’s studies adviser and the coordinator of the women’s studies program (WoSt 4901).

Courses with grades of D are not acceptable to meet the major requirements.

Note: students planning to major in women’s studies should register with the coordinator of women’s studies by the beginning of the junior year.

Minor Requirements

A minimum of 28 credits to include:
WoSt 1101—Introduction to Women’s Studies
WoSt 1111—Women’s Studies Across the Curriculum
An additional 20 credits from the courses listed below are to be selected from at least three different disciplines.

Course Descriptions

**Anth 2300s. Variable Topics in Latin American Cultures and Societies.** (IP; 4 cr; repeatable when topic changes; prereq 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 2302s. Women in Latin America.** (IP; 4 cr; prereq 1111 or Soc 1101)

**Anth 2302H. Honors: Women in Latin America.** (IP; 4 cr; prereq 1111 or Soc 1101, # for students not in Honors Program)

Same as Soc 2302H. In addition to regular course work, honors students are required to compose one creative research paper and acquire pedagogical skills through leading occasional class discussions.

**Anth 3281s. Women and Art.** (FA; 4 cr; prereq 1101 or 1111 or 1121 or jr status; not offered 2001-02)

An historical survey of the role of women as creators and patrons of the visual arts in Western European and American societies, from antiquity to the present.

**Biol 3101s. Genetics.** (Sci-L; 4 cr; prereq 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)

**Econ 4101f. Labor Economics I.** (HDiv; 2 cr; prereq 3201 or #)

Wage and employment determination. Distribution of earnings and earnings inequality by race and sex. Labor supply applications.

**Econ 4900f. Variable Topics in Economic Research.** (See specific topics for general education categories; 2 cr; repeatable when topic changes; prereq 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 4906. Gender Issues.** (HDiv; 2 cr; prereq 3201, 3202 or #)

**Engl 3321s. Women’s Literature.** (4 cr; prereq 1100, 2011)

Examination of women writers as a distinct group, with attention to ethnic, class, and cultural differences, includes readings in feminist theory.

**Ger 3501s. Women’s Issues in Contemporary German Culture.** (IP; 4 cr; prereq 3101 or 3102 or #; not offered 2002-03)

The focus is on the German women’s movement during the twentieth century, the historical relationship of gender and class, and the lives of women from various ethnic backgrounds in Germany and Austria. Short stories, essays, and poems document the evolution of feminist literary theory in German studies.

**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 3700. Variable Topics in the History of Women.** (See specific topics for general education categories; 4 cr; repeatable when topic changes; prereq 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; prereq 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; prereq WoSt 1101 or Hist 1101, Hist 1102, Hist 1301; offered when feasible) 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; prereq WoSt 1101, Hist 1101 or Hist 1102 or Hist 1201)

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 1304. French Women Authors in Translation. (IP; 4 cr; offered when feasible) French women’s movements during the twentieth century, the historical relationship of gender and class, and the lives of women from various ethnic backgrounds in France; the history of French women authors in a global context. Guest lecturers may, when appropriate, provide some comparisons among European and global feminisms.

Phil 1121. Introduction to the Philosophy of Religion. (HDiv; 4 cr; offered spring 2002) An introduction to fundamental philosophical questions concerning religion, such as the notion of divinity, the possibility of proving the existence of a divinity, the relationship between faith and reason, etc. Views belonging to distinct religious traditions as well as to different gender, racial, and social perspectives will be discussed.

Phil 2131s. Introduction to the Philosophy of Science. (HDiv; 4 cr; offered spring 2003) An introduction to modern philosophical discussion concerning the nature of science. Topics cover the basic concepts and logic of scientific inquiry, 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.

Pol 3500s. Variable Topics in Comparative Politics. (See specific topics for general education categories; 4 cr; repeatable when topic changes; prereq 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; prereq 1201, 2101 or #; not offered 2002-03) 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 2001-02) 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 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; prereq #, 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.

Soc 2101f. Prejudice, Discrimination, and Systems of Oppression. (HDiv; 4 cr; prereq 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; prereq 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 2302s. Women in Latin America. (IP; 4 cr; prereq 1101 or Anth 1111)

Soc 2302Hs. Honors: Women in Latin America. (IP; 4 cr; prereq 1101 or Anth 1111; # for students not in Honors Program) Same as Anth 2302H. In addition to regular course work, honors students are required to compose one creative research paper and acquire pedagogical skills through leading occasional class discussions.

Soc 3121f. Sociology of Gender. (HDiv; 4 cr; prereq 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.
Division Structure and Course Descriptions

**Soc 3200s. Variable Topics in Social Stratification.** (HDiv; 4 cr; repeatable when topic changes; prereq 1101 or Anth 1111; offered when feasible)
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; prereq 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; prereq 1101 or Anth 1111)

**Span 3500f. Variable Topics in Spanish Peninsular Literature.** (Hum; 4 cr, repeatable when topic changes; prereq 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 3501. The Prose of Spanish Renaissance and Golden Age.** (Hum; 4 cr; prereq 3002, 3101)
Golden Age theatre.

**WoSt 1101. Introduction to Women’s Studies.** (HDiv; 4 cr; A-F only)
Biology of the sexes, gender, ideas/literature about women, women’s history, women’s economic/social conditions.

**WoSt 1111. Women’s Studies Across the Curriculum.** (HDiv; 4 cr; not offered 2001-02)
Methodologies/theories of various disciplines in women’s studies.

**WoSt 3000. Variable Topics in Women’s Studies.** (See specific topics for general education categories; 2-4 cr)
Offered by various women’s studies faculty in their discipline of expertise.

**WoSt 4801. Culminating Experience in Women’s Studies.** (HDiv; 4 cr; prereq completion of 32 cr in women’s studies)

**WoSt 4901. Assessment of Student Learning in Women’s Studies.** (1 cr; prereq completion of 32 cr in women’s studies; S-N only)
Requires essays demonstrating learning in women’s studies.

**WoSt 3993f,s, 4993f,s. Directed Study.** (1-5 cr; repeatable; prereq #)
Research in women’s studies.