## 970. Problems in Medical Geography

Fall, Winter, Spring. Variable credit.
May re-enroll for a maximum of 6 credits. Approval of department.

Selected research topics in medical geography.

#### 999. Research

Fall, Winter, Spring, Summer. Variable credit. Approval of department.

## **GEOLOGY**

**GLG** 

## College of Natural Science

## 200. The Geology of Man's Environment

Fall, Winter, Spring, Summer. 3(3-0) Not open to Geology majors.

The relation of geological processes and Earth materials to man. The nature and evolution of the Earth and life upon it, Man's exploitation of the non-renewable resources of the Earth.

## 200L. Laboratory-Geology of Man's Environment

Fall, Winter, Spring, Summer. 1(0-3) 200 or concurrently.

The geological reasoning concerning the nature and evolution of the Earth.

#### 201. Earth Processes

Fall, Winter, Spring. 4(4-2) Credit will be given for only one of the following: 200, 201, 306.

Physical processes concerning evolution of Earth and its environments. Conservation and interaction of energy and matter through time. Laboratory stresses interpretation of process through studies of geologic data.

#### 202. Evolution of the Earth

Fall, Winter, Spring. 4(4-2) 200; or 201; or 306.

Integration of physical, chemical and biological processes from which man's present environment has evolved; problems and controversies in the development of ideas of geologic and organic evolution

#### 203. Introduction to Study of the Moon

For course description, see Interdisciplinary Courses.

## Oceanology—The Marine Environment and Man 205.

Fall. 3(3-0)

Physical oceanography, including origin, hydrologic, chemical, geological properties; and environmental quality of the oceans. Man-sea interactions are emphasized including resource utilization and pollution.

#### Minerals, Rocks and Fossils 221.

(326.) Spring 3(2-3) Not open to majors.

Description, occurrence and identification of minerals, rocks, fossils, and additional features of especial significance to general science teachers and other earth science interest groups.

#### 271. Geophysics and the Earth

Spring. 3(3-0) 200 or 201 or 306 or approval of department.

Basic concepts used in geophysics, including description of the Earth and its interior, methods of exploring for mineral and energy resources. Contributions of physical methods to understanding our terrestrial environment.

### 281. Mineral Resources of the Earth Fall. 3(3-0)

Mineral resources; their genesis, occurrence, exploitation and use. Future projections from historic and current developments. The impact on international affairs and the welfare of nations. Field trip.

## Energy Resources of the Earth 282. Winter. 3(3-0)

World energy resources of petroleum, coal, and atomic fuel. Social, political, economic and environmental problems of fuels.

#### 295. Introductory Earth Chemistry

Winter. 3(3-0) 200 or 201 or 306. or approval of department.

Qualitative description of processes affecting distribution of elements in rocks, soils waters, the atmosphere, and meteorites. Age of the earth. Origin of the elements. Geochemical methods to study the evolution of the mantle, crust, atmosphere and oceans.

## Vertebrate Life of the Past

Fall. 3(3-0) One course in a physical or biological science for Juniors. Interdepartmental with the Zoology Department.

Fossil vertebrates from fish to man.

#### Introductory Geomorphology 303.

Winter. 3(3-0) 200 or 201 or 306.

Descriptive course treating the geological origin and development of important surface features including special consideration of Pleistocene landforms of the Great Lakes region.

# 303L. Laboratory—Introductory Geomorphology

Winter. 1(0-2) 303 or concurrently.

Methods of map interpretation and use of aerial photographs in geomorphology. Supplemental field trip to study the geology of pertinent land-

#### 304. Geology of Michigan

Fall. 3(3-0) 200 or 201 and/or 202; or approval of department.

A historical accounting of the physical historical and economic geology of Michigan and its environs; a course designed for students seeking an overall picture of the rather unique Michigan geological environment,

306. Engineering Geology
Fall. 3(3-2) Credit will be given for only one of the following: 200, 201, 306. Sophomore Engineering students.

Fundamental principles of geology as applied to civil engineering practice. Minerals and rocks, aerial photographs, topographic and areal geologic maps and geologic cross sections studied in laboratory. Source of geologic literature and maps.

#### 307. Geology Central Appalachians

Winter. 1(0-2) 200, or 201, or 202,

General geology of the Central Appalachians. A preparatory course for 308. Field excursions— Central Appalachians during spring vacation.

## 308. Field Excursion -- Central Appalachians

Spring. 2 or 3 credits. 307.

Training in stratigraphic, sedimentological, paleontologic, and structural principles as applied to field methods.

## 321. Mineralogy

(421.) Fall. 5(4-4) One term of chemistru.

Introduction to crystal systems and forms exhibited by minerals, followed by study of composition, occurrence, classification, and identification of nonmetallic minerals.

#### 322. Mineralogy

(422.) Winter. 4(3-4) 321.

Selective qualitative analysis of minerals by blow pipe and other methods.

### 335. Fossil Plants, Their History and Paleoecology

Winter. 3(3-0) One course in geology or botany or biology or approval of department. Interdepartmental with the Botany and Plant Pathology Department.

History of plants through geologic time; their form and evolution; how and where found, identified and reconstructed; their use in determining ancient geographic patterns, paleo-environments, paleoclimates and community structure. Field trip.

## Field Geology-Summer Camp

Summer. 9 credits. 202, 363. Trigonometry; GLG 446, 437, 451 recommended. Methods and techniques of geological surveying and mapping. Field interpretation of geologi-cal phenomena in igneous, metamorphic and sedimentary rocks in northern Michigan and Wisconsin.

## A. Introduction to Field Techniques

3 credits.

Introduction to field techniques with stress on those that apply to sedi-mentary rocks. Stratigraphic correla-

## B. Methods of Geological Mapping

4 credits.

Plane table surveys, aerial photo and reconnaissance mapping. Examination and interpretation of structural and textural relationships in igneous and metamorphic rocks.

C. Geologic Interpretation of Selected Areas

Independent mapping and interpretation.

#### 363. Lithology

(323, 423.) Spring, 4(3-4) 321.

Processes that form igneous, metamorphic and and igneous rocks, origin, distribution, variation and occurrence of rock. Study of rock properties in the field, in laboratory, and with the microscope.

## 400H. Honors Work

Fall, Winter, Spring. Variable credit. Approval of department.

## Environmental Geology

Spring of odd-numbered years. 3(3-0) 200, or 201, or 306 MTH 113, or approval of department.

Quantitative solution of geological problems applied to environmental planning and manage-ment, including surface and ground water waste disposal, urban geology, and methods for predic-tion of geologic hazards and resources.

## Hydrogeology

Spring. 3(3-2) One term of geology and trigonometry.

Principles of the source, occurrence, and movement of ground water. Surface and subsurface investigations of ground water and elementary ground water hydrology.

#### 413. Glacial Geology

Spring. 3(3-2) 201.

Geological aspects of glaciers and glaciation. Theories of ice ages through geologic time. Origin and development of glacial geomorphic features. Character and chronology of the Pleistocene. Laboratory techniques, with field trips to observe glacial materials and features of Michigan.

### 415. Physical Limnology of the Great Lakes

Spring of even-numbered years. 3(3-0) Approval of department.

Discusses the Great Lakes physical system, including regional geology, hydrodynamics, hydrology, chemistry, sedimentology interaction with the biota, environmental degradation and res-toration. Special emphasis on topics of current interest. Field trips.

## Optical and X-ray Mineralogy 426. (461.) Winter. 4(3-4) 321, PHY 239 or 289.

Theory, principle and application of the polarizing microscope and X-ray diffractometer in mineral analysis.

## Vertebrate Paleontology

Winter. 4(3-3) ZOL 314 or approval of department. Interdepartmental with the Zoology Department.

Fossil vertebrates with emphasis on the evolu-tion of major groups. Laboratories on modern techniques and on the identification and interpretation of fossils.

#### 432. Introduction to Meteorology

For course description, see Interdisciplinary Courses.

#### Introductory Meteorology 433. Laboratory

For course description, see Interdisciplinary Courses.

#### Invertebrate Paleontology 437.

(431.) Fall. 4(3-4) 202 or ZOL 381 or approval of department. Interdepart-mental with the Zoology Department.

Systematics and evolution of marine inverte-brates; uses of fossils in correlation and delinea-tion of geologic time; structure and morphology of fossils as related to evolutionary development.

#### 438 Paleoecology

Spring, 4(3-4) 202 or ZOL 389 or approval of department. Interdepartmental with the Zoology Department.

Distribution and abundance of marine fossils; response of skeletal morphology to environ-mental conditions; uses of fossils in recon-structing ancient climates and depositional environments.

#### 445. Field Studies

Fall, Winter, Spring, Summer. Variable credit. May re-enroll for a maximum of 12 credits. Approval of department.

Advanced geological or geophysical field studies.

446. Principles of Stratigraphy
(434.) Fall. 3(3-0) 437, 492 or approval of department.

Covers principles of stratigraphy and application and exemplification of these principles to known geologic occurrences.

#### 451. Structural Geology Spring. 4(2-6) 202.

Description, classification, and origin of second-ary structures such as folds, faults, joints, cleav-ages, foliations and lineations. Three-dimensional visualization stressed in economic laboratory problems involving descriptive geometry, stereo-graphic projections, areal, and structural geo-logic maps.

#### 462. Petrology

Fall. 4(3-4) 363.

Introduction to the chemical and physical processes that are responsible for the origin and evolution of igneous and metamorphic rocks. Laboratory studies of rock suites that illustrate basic processes in petrology.

### 474. Geophysical Exploration Methods

Winter. 4(3-2) 201 or 306; MTH 112; PHY 239 or 289.

Techniques used in geophysical exploration, with application in petroleum prospecting, minerals exploration, and engineering. Includes gravity, magnetic, seismic, electrical and other methods, and well logging, Interpretation of geophysical data.

#### 475. Solid Earth Geophysics

Fall. 3(3-0) MTH 112; PHY 239 or 289, one term of geology.

Geophysics, including Earth's composition and structure, its dynamic character, radioactivity and age determinations, seismicity and seismology, gravity and magnetic fields, heat flow, physical properties of earth materials.

#### 479. Geotectonics

Winter of even-numbered years. 3(3-0) 451 or approval of department.

Aspects of global dynamics and geotectonics. Includes the origin and distribution of major structural features, geological and geophysical evidence for crustal movements, continental drift, behavior of earth materials.

## 482. Mineral Resources-Metallic and Industrial

Spring of odd-numbered years. 3(3-0) May re-enroll for a maximum of 6 credits. 201,

World-wide, metallic and industrial minerals resources will be discussed from a geological viewpoint. Aspects of exploration, recovery and beneficiation will be presented.

## Petroleum Geology 483.

Fall. 3(3-2) Approval of department.

Fundamental principles of the origin, migration and accumulation of petroleum. Exploration techniques to include well drilling, electric and radioactivity well logging, surface and subsurface exploration methods, seismic surveys, land leasing and oil field development. Laboratory study of well log plotting and subsurface mapping technique.

## 484. Applied Petroleum Geology Winter. 3(1-4) 483.

Microscopic examination of well cuttings, practice in the use of electric and radioactivity logs, exploration for petroleum in selected areas by subsurface mapping techniques, economics of petroleum exploration.

#### 492. Sedimentology I

Fall. 3(2-3) 426 or approval of department.

Grain and aggregate properties of sediments; relationships of these properties to processes in the environment of deposition and to the pre-depositional and post-depositional history.

## Sedimentology II Winter. 3(2-3) 492.

Quantitative evaluation of sediment properties; sedimentary structures; regional analysis of sediment variation.

#### 495. Geochemistry

Spring. 3(3-0) 201, CEM 152 or approval of department.

Processes affecting the distributions of elements Processes affecting the distributions in rocks, soils, waters, the atmosphere, interior of the earth and in meteorites. Origin of the elements. Evolution of the mantle, crust, atmosphere and oceans.

#### 800. Special Problems

Fall, Winter, Spring, Summer. Variable credit. Approval of department.

Special problems in hydrogeology, geomorphology and glacial geology, mineralogy and crystallography, petrology, paleontology, structural geology ogy, and petrofabrics, stratigraphy, aerogeology, geophysics, economic geology, petroleum geology, sedimentation, and geochemistry.

## World Regional Geology

Spring of even-numbered years. 3(3-0) One course each in structural geology, sedi-

World regional geology emphasizing mountain building, basin structure and associated sediments, continental drift and plate tectonics.

#### 810. Seminar

Fall, Winter, Spring. 1 credit. May re-enroll for a maximum of 3 credits. Selected topics relating to current research in

#### 811. Marine Geology

Fall of even-numbered years 3(3-2)Approval of department.

Geomorphic, sedimentary, and chemical ocean-ography including origin of ocean basins, chem-ical loading and history of the sea, buffering and sediment-water interactions, and sediment

#### 812. Principles of Geomorphology

Fall of odd-numbered years. 3(3-2) 201, 303, or approval of department.

Landforms and processes involved in their origin and development. Emphasis on fundamental concepts as they relate to destructional and constructional stresses on earth materials. Introduction to quantitative laboratory and field methods,

#### Field Glaciology 814.

Summer. Variable credit. Approval

Expeditionary camp in an area of existing glaciers providing field training in glaciology and associated disciplines. Usually conducted at the Institute field stations on the Juneau Icefield, Alaska. Formal lectures given concurrently with a program of related field research.

#### 825. Clay Mineralogy

Winter. 4(3-4) SLS 840, 850 or approval of department. Interdepartmental with Soil Science.

Structures and properties of clays; their origins, occurrence, and utilization. Methods of studying clays including x-ray diffraction, differential thermal analysis, infrared absorption and other chemical and physical techniques.

#### 830. Paleobotany

Fall. 4(3-4) Approval of department. Interdepartmental with and administered by the Botany and Plant Pathology Department.

Survey of fossil plants: their preservation, occurrence, geology, paleogeography, paleoecology, evolutionary history, classification and representative types. One weekend field trip to fossil plant locality.

#### Palynology 831.

Spring of even-number years. 4(3-4) Approval of department. Interdepartmental with the Botany and Plant Pathology Department.

An introduction to the principles and techniques of spore and pollen analysis, both fossil and recent, and utilization of plant micro-fossils for stratigraphic determinations and paleoecologic interpretations of most sedimentary accumulations and rocks. Includes certain algae, protozoans, similar organisms of uncertain affinity and dissociated fragments of larger organisms.

## Advanced Invertebrate 833. Paleontology

A. MICROPALEONTOLOGY

Spring. 3(2-4) 437 or 438. Interdepartmental with the Zoology Department. Functional and adaptive morphology of microscopic fossil invertebrates, emphasizing foraminifera, ostracoda, and conodontachordata.

B. QUANTITATIVE PALEONTOLOGY

Spring. 3(2-4) 437 or 438. Inter-departmental with the Zoology Department.

Application of mathematical tools to paleon-tological problems, including statistical applica-tions and numerical taxonomy; computer applications.

## C. PALEONTOLOGY

Spring. 3(2-4) 437 or 438. Interdepartmental with the Zoology Department.

Advanced problems in the distribution and abundance of fossil invertebrates; morphological adaptations to environmental pressures.

## D. Fossil Morphology

Spring, 3(2-4) 437 or 438. Interdepartmental with the Zoology Department.

Skeletal morphology of fossil invertebrates, emphasizing the multivariate morphometric approach and other modern methods of morphological analysis.

## Advanced Vertebrate 834. Paleontology

Winter of even-numbered years. 3(3-0) 430 or approval of department, Interdepartmental with the Zoology Department.

Recent advances and controversial issues in vertebrate paleontology including origin, classification, phylogeny, and stratigraphic relation-ships of fossil vertebrates.

## Advanced Paleobotany

Spring of odd-numbered years. 3(2-4) Approval of department. Interdepartmental with and administered by the Botany and Plant Pathology Department.

Morphology, anatomy, phylogenetic relationship and classification of fossil plants. Microscopic analysis of tissues and organs prepared by thin section, transfers, peels, polished and etched surfaces, and macerations.

### 843. Paleozoic Stratigraphy

Winter of even numbered years. 4(5-0) 446, 492.

Classification, distribution, paleogeography, paleontology, interrelation, and structural setting of stratigraphic units within the Paleozoic systems. Laboratory work involves construction of cor-relation charts, structure and restored sections, paleogeologic, paleogeographic, and lithofacies maps, and study of certain key fossils.

## Mesozoic and Cenozoic 844. Stratigraphy

Winter of odd-numbered years. 3(3-0)

Stratigraphy and paleontology with emphasis on tectonics and sedimentation.

### 852. Advanced Structural Geology Winter of even-numbered years. 3(2-4) 451. MTH 214.

Mathematics and physics applied to problems in structural geology.

## Evolution of the Earth's Crust 861. and Mantle

Spring, 3(3-0) 462.

The composition, mineralogy and petrology of the Earth's mantle and crust. Plate tectonics and its relationship to earlier models of geosynclines, orogenic cycles, continental drift, etc.

#### 862. Petrology—Igenous

Winter of even-numbered years. 2 to 4 credits. May re-enroll for a maximum of 8 credits.

Physical and chemical principles involved in the origin of igneous rocks. Application of experimental techniques in petrology.

## Petrology-Metamorphic

Winter of odd-numbered years. 2 to 4 credits. May re-enroll for a maximum of 8 credits. 462.

Origin and classification of metamorphic rocks. Study includes thin section investigation of the metamorphic textures and mineral associations and the physical-chemical principles involved in their development.

#### Topics in Geophysics 870.

Spring. 1 to 3 credits. May re-enroll for a maximum of 12 credits. Approval of department.

Topics and problems in geophysics, such as tectonophysics, terrestrial heat flow, processing and analysis of geophysical data, geomagnetism, paleomagnetism, high-pressure geophysics.

#### 872. Exploratory Seismology

Fall of even-numbered years.

474.

Theory and technique of field seismic exploration methods. An associated geophysical survey will be conducted and a report prepared.

## Seismology I

Winter of odd-numbered years. 3(3-0) MTH 215 or concurrently; PHY 289 or concurrently.

Theory and application of seismic wave propagation in earth materials,

## Seismology II

Spring of odd-numbered years. 3(3-0) 873 or approval of department. Continuation of 873.

### 875. Advanced Geophysical Exploration I

Fall of odd-numbered years, 4(3-2)

474

Theory and technique of gravity and magnetic methods, and their use in geophysical exploration. Associated practical exercises and laboratory work.

### Advanced Geophysical 876. Exploration II

Winter of even-numbered years 4(3-2) 474: MTH 214.

Methods used in geophysical exploration, apart from the seismic and potential techniques. Associated practical exercises.

#### 879. Rock Magnetism and Paleomagnetism

Spring of even-numbered years, 3(3-0) 321, 475, one year mathematics, one year physics; or engineering or physics majors.

Geomagnetism, and application to earth science. Character and history of the Earth's magnetic field, physics of remanent magnetism, magnetic properties of minerals and rocks, paleomagne-tism, experimental results and procedures.

## Regional Petroleum Geology

Spring of odd-numbered years. 3(3-0) Approval of department.

Regional study of tectonics, stratigraphy and sedimentation in the U.S. and their relationship to petroleum occurrences in sedimentary basins. Analysis of petroleum distribution with emphasis on creative thinking in petroleum exploration. Practice in the analysis of petroleum possibilities in selected foreign areas.

#### 891. Advanced Sedimentology

A. RECENT DEVELOPMENTS IN SEDIMENTOLOGY

(864.) Spring. 3(2-4) May re-en-roll for a maximum of 12 credits. 493, approval of department.

New techniques for study of sediments and sedimentary rocks. Discussion of significant new findings and applications of sedimentology.

## B. QUANTITATIVE ANALYSIS OF SEDIMENTS.

(864.) Spring. 3(2-4) May re-en-roll for a maximum of 12 credits. 493, approval of department.

Representation and analysis of sediment variation from microscale to regional scale. Definition of efficient empirical variables. Role of mathematical and stochastic models.

C. Environmental Sedimentology (864.) Spring. 3(2-4) May re-en-roll for a maximum of 12 credits. 493, approval of department.

Determination of rates of sediment erosion, transport, and deposition. Partitioning of deposited sediment with regard to sources. Sediment as a biologic substrate.

## D. ANALYSIS OF DEPOSITIONAL ENVIRONMENTS

(864.) Spring. 3(2-4) (864.) Spring. 3(2-4) May re-en-roll for a maximum of 12 craits. 493, approval

Depositional processes, common depositional environments, migration of environments, environmental interpretations of three dimensional patterns of variation in sedimentary rocks.

## Carbonate Sedimentation

Fall of odd-numbered years. 3(2-2) Approval of department.

Genesis of carbonate sediments including carbonate-secreting organisms, effect of environ-ment on mineralogy, depositional environments, and the dolomite problem. Field trips.

## Topics in Geochemistry

A. THERMODYNAMICS IN GEOLOGY

Fall. 1 to 3 credits. May re-enroll for a maximum of 12 credits. 462, 495.

Interpretation and prediction of natural mineral assemblages from thermochemical studies. High pressure and high temperature techniques in petrology. Phase equilibria studies and diffusion phenomena in natural systems.

## B. AQUEOUS GEOCHEMISTRY

Fall. 1 to 3 credits. May re-enroll for a maximum of 12 credits. 462, 495.

Ideal and non-ideal solutions, ion activities in natural waters, carbonate sedimentation, evapor-ite deposits, colloids, chemical weathering and diagenesis. Importance of organio species in natural waters and their effect in metal com-plexing. Redox reactions.

## C. Analytical Geochemistry

Fall. 1 to 3 credits. May re-enroll for a maximum of 12 credits. 462, 495.

Instrumental techniques for the analysis of geological materials. Topics on application of X-ray diffraction, X-ray fluorescence, neutron activation analysis, and atomic absorption spectometry. Recently developed techniques in geochemistry will be discussed.

#### 897. Isotope Geochemistry

(892.) Winter of odd-numbered years. 3(3-0) 495 or approval of department. The abundances of stable and radiogenic nu-The abindances of stable and radiogenic fuc-clides and their variations in nature. Applica-tions to geochronology and petrogenesis. Prin-ciples and application of neutron activation analysis to geological problems.

#### 899. Research

Fall, Winter, Spring, Summer. Vari-lit. Approval of department. able credit.

## 900. Special Problems

Fall, Winter, Spring, Summer. Variable credit. Approval of department.

Special problems in hydrogeology, geomorphology and glacial geology, mineralogy and crystallography, petrology, paleontology, structural geology and petrofabrics, stratigraphy, aerogeology, geophysics, economic geology, petroleum geology, sedimentation, and geochemistry.

## 999. Research

Fall, Winter, Spring, Summer. Variable credit. Approval of department.

## Earth Science

E S

# 407. Earth Science for Teachers (PHS 407.) Fall. 3(3-0) or 4(3-3).

Fundamentals of climatology and its relationship to weathering in rocks; agents of erosion, transportation, and deposition; study of the common minerals; the three classes of rocks, and igneous, sedimentary and metamorphic processes; geomorphic features including glaciers, volcanoes, oceans, lakes, deserts, caves and others. Laboratory includes indentification of minerals, rocks; study of topographic maps; and field trips to points of geologic interest.

## 408. Earth Science for Teachers

(PHS 408.) Winter. 3(3-0) or 4(3-3)

Continuation of physical geology and introduction to historical geology, containing discussions of earth structures, mountain building, economic geology; geologic time, basic astronomy, theories of earth origin; the earliest geologic eras, first evidences of life.

# 409. Earth Science for Teachers

(PHS 409.) Spring. 3(3-0) or 4(3-3) Historical development of the various geologic periods through time with reference to the evolutionary development of the physical landscape, ancient geography, past climate, diastrophic events and marine and land animals and plants. Laboratory includes the identification of important animals and plant fossils, fossil environments, geologic maps; field trips to collecting localities.

## 410. Earth Science Seminar for Teachers

Fall, Winter, Spring. 1(2-0) May re-enroll for a maximum of 4 credits. One earth science subject matter course or concurrently. Earth science subject matter areas will be inter-related through student presentation and discussion and their interdisciplinary significance developed.

## 445. Field Studies

Fall, Winter, Spring, Summer. 1-9 credits. May re-enroll for a maximum of 15 credits. Approval of department.

Experience and techniques in field investigation of the near surface layers of the earth.

## 446. Laboratory Investigations

Fall, Winter, Spring, Summer. 1-6 credits. May re-enroll for a maximum of 15 credits. 445 or concurrently.

Independent laboratory investigation of materials and phenomena obtained from field studies.

## GERMAN AND RUSSIAN

# College of Arts and Letters

Students who have had high school work in the foreign language in which they wish to continue their studies must take a placement examination

in that language. Placement in the appropriate course is determined by the results of this examination. University credit is not given for courses waived by performance on the placement examination.

# German and Russian Courses GR

## 299. Special Projects

Fall, Winter, Spring, Summer. Variable credit. May re-enroll for a maximum of 18 credits. Approval of department.

Work in areas outside regular course offerings.

## 303. Folklore

Spring. 3(3-0)

Folk heritage of peoples as revealed in their legends, superstitions, ballads, folksongs, hero tales, sayings, customs, and beliefs. Historical development of traditional lore as a reflection of social attitudes and the source for national mythologies.

## 417. Scandinavian Contributions to Literary Tradition

Fall. 3(3-0) Approval of department. Development and influence of the ideas, forms and motifs of the Scandinavian literatures in the literatures of the world.

## 418. Scandinavian Contributions to Literary Tradition

Winter. 3(3-0) Approval of depart-

ment.

Continuation of 417.

## 419. Scandinavian Contributions to Literary Tradition

Spring. 3(3-0) Approval of department. Continuation of 418.

## 499. Special Projects

Fall, Winter, Spring, Summer. Variable credit. May re-enroll for a maximum of 18 credits. Approval of department.

Work in areas outside regular course offerings.

# 825. Comparative Literature: Studies in Theme and Idea

Fall. 3(3-0) May re-enroll for a maximum of 9 credits. Interdepartmental with the departments of Romance Languages and English and administered by the Romance Languages Department.

Myths, archetypes, Topoi, significant ideas and intellectual currents in different periods and cultural traditions.

## 856. Comparative Literature: Literature and Other Disciplines

Winter. 3(3-0) May re-enroll for a maximum of 9 credits. Interdepartmental with the departments of Romance Languages and English and administered by the Romance Languages Department.

Relations between literature and the sciences and other arts; social, historical, psychological, philosophical bases of literary study.

## 878. Comparative Literature: Methods in the Study of Comparative Literature

Fall. 3(3-0) Interdepartmental with the English and Romance Languages Departments and administered by the English Department

Rationale and techniques of study in comparative literature.

# 902. Comparative Literature: Studies in Form and Genre

Fall, Winter, Spring. 3(3-0) May reenroll for a maximum of 9 credits. Interdepartmental with the English and Romance Languages Departments and administered by the English Department.

Development and interrelationships of individual and collective forms and genres of literatures of the Western world, including the drama, tragedy, the novel, the short story, the theory and forms of poetry, popular literature, and the tale.

# 903. Comparative Literature: Studies in Periodization

Fall, Winter, Spring. 3(3-0) May re-enroll for a maximum of 9 credits. Inter-departmental with the English and Romance Languages Departments and administered by the English Department.

Analyses of the manner in which various genres, conventions and continuing traditions of literature interact with the creative and critical climates of particular periods and movements, such as classicism, the Middle Ages, the baroque, or romanticism, in qualifying or modifying characteristic literary works.

# 987. Seminar: Special Topics in Comparative Literature

Spring. 3(3-0) May re-enroll for a maximum of 9 credits. Advanced graduates. Interdepartmental with the departments of Romance Languages and English and administered by the Romance Languages Department.

# German GRM

# 101. Elementary German

Fall, Winter, Spring, Summer. 5(5-0)

German language, civilization, and culture. Development of language skills in contemporary German. Independent practice in the language laboratory.

## 102. Elementary German

Fall, Winter, Spring, Summer. 5(5-0)

101.

Continuation of 101.

## 103. Elementary German

Fall, Winter, Spring, Summer. 5(5-0)

102.

Continuation of 102.

# 201. Intermediate German—Regular

Fall, Winter, Spring, Summer. 4(3-1) 103. Students may not receive credit for both 201 and 211.

Systematic review of grammar, oral practice, intensive and extensive reading of modern texts. This course or equivalent is required of majors and those planning to take advanced work in German.

# 202. Intermediate German-Regular

Fall, Winter, Spring, Summer. 4(3-1) 201. Students may not receive credit for both 202 and 212.

Continuation of 201.

# 203. Intermediate German—Regular

Fall, Winter, Spring, Summer. 4(3-1) 202. Students may not receive credit for both 203 and 213.

Continuation of 202.

# 211. Intermediate German-Reading

Fall, Winter, Spring, Summer. 4(4-0) 103. Students may not receive credit for both 201 and 211.

For students primarily interested in learning to read German. Review of grammar, reading in a variety of materials. Not open to those planning to take advanced work in German.