

Departments

487, 488, 489, 490 Topics

The subject matter of these courses, announced in the annual *Class Schedule*, will vary from year to year, but will not duplicate existing courses. See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

491, 492, 493, 494 Research

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

495, 496, 497, 498 Individual Study

See the description of these courses at the beginning of the "Departments and Curricula" section of this catalog.

Geology (GEOL)

(chair to be appointed); Chaplin, director of Division of Natural Sciences and Mathematics

Geology is the science of the earth, and, like other disciplines, it is subdivided into specific studies. The department offers a variety of courses basic to an undergraduate geology curriculum in order to provide the student with a sound foundation.

Those majoring in geology are required to take courses in the allied sciences (biology, chemistry and physics) and in mathematics because of their importance to the study of earth science.

The aims of the Department of Geology are to provide a major program for students who will continue their study of geology in graduate school; to prepare students to do geological work in industry and government; to offer a program that prepares students to teach earth science at the secondary-school level; and to permit interested students to broaden their liberal arts education.

Students graduating with a major in geology will demonstrate a broad general knowledge of the fundamental principles of geology that will include, but not be limited to, the areas of physical, historical, and structural geology, mineralogy, petrology, geomorphology, and stratigraphy or geophysics.

The department also offers courses for non-majors to fulfill the laboratory science component of the core curriculum.

Major in Geology

- 111 Introductory Geology I
- 112 Introductory Geology II
- 211 Mineralogy
- 252 Geomorphology
- 311 Petrology
- 322 Structural Geology
- 421 Geophysics

Plus:

- MATH 113 Calculus I
- MATH 114 Calculus II

Plus two of the sequences:

- BIOL 201 Diversity and Adaptation *and* 202 Genetics and Population Biology

or

- CHEM 111 General Chemistry I *and* 112 General Chemistry II

or

- PHYS 111 Introduction to Classical Physics I *and* 112 Introduction to Classical Physics II

The department recommends that students planning to do graduate work take additional courses in the allied sciences and in mathematics. The department also recommends that students take a summer field course at a recognized geology field camp, preferably between the junior and senior years.

Teacher Licensure

Elementary Education with a Co-major in Science *and* Mathematics for Elementary Education

Elementary Education with a Specialty in Science (5-8)

Co-major in Science (5-8) – Earth and Space (9-12) and a Co-major in Secondary Education

See Department of Teacher Education.

Minor in Geology

- 111 Introductory Geology I
- 112 Introductory Geology II
- 252 Geomorphology
- 322 Structural Geology*

*Prerequisite of 311 is waived for students minoring in geology.

Plus one of:

211 Mineralogy

311 Petrology*

421 Geophysics

*Prerequisite of 211 is waived for students minoring in geology.

102 Origins and Methods (111)

A study of the basic concepts of geology that were first developed by James Hutton in the late 18th century and their application today. This is an introductory science course specifically designed to reduce the mystique that often is associated with the scientific method. Following Hutton's example, the study will focus on the materials which make up the earth and on the geologic processes that operate on these materials. This course includes a four-hour-per-week laboratory component. Offered in January term.

110 Geology of the National Parks

The course begins with an examination of the national park system. A review of the conflicts associated with the use of public lands, including environment-influencing geological factors, follows. The next segment involves an overview of geologic concepts, processes and materials utilizing examples from the national parks. This course closes with a study of the specific geologic materials, natural processes, landforms and sequence of events responsible for the outstanding scenery in selected U.S. national parks. Laboratories will be integrated with lecture and will include study of the rocks common to the national parks; analysis of geomorphic, topographic and geologic maps of the national parks; environment-related geologic exercise and field studies of local sites. Lecture and two laboratory hours per week.

111 Introductory Geology I (102)

A study of the Earth's properties; the formation and classification of minerals, rocks, ore deposits, and fuels; and the nature and origin of the Earth's surface and interior. Emphasis will be placed upon a changing Earth, the constructive and destructive forces, and the geologic processes operating at the surface and in the interior. Lecture and two laboratory hours per week.

112 Introductory Geology II

The application of geologic principles to an interpretation of the physical and biological changes that have occurred on and within the earth. Lecture and two laboratory hours per week.

Prerequisite: 111

211 Mineralogy

A systematic approach to mineral study involving crystallography, analysis of physical and chemical properties, mineral formation, and methods of identification and classification. Lecture and three laboratory hours per week.

Prerequisite: 111

252 Geomorphology

The study of landforms, the geologic processes that produce them, their evolution, and their distribution over the Earth's surface. Aerial photographs introduced for purposes of geomorphic analysis. Lecture and three laboratory hours per week.

Prerequisite: 111

295, 296, 297, 298 Topics

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311 Petrology

A study of the physical and chemical factors that relate to the environment of formation for igneous, sedimentary and metamorphic rocks. A systematic approach to rock analysis, identification and classification. The petrographic microscope introduced in the laboratory. Lecture and three laboratory hours per week.

Prerequisite: 211

322 Structural Geology

An analysis of the structures within the Earth's crust, their origin and classification, the principles of rock deformation, and an introductory study of the Earth's mantle and core. Lecture and three laboratory hours per week.

Prerequisite: 311

421 Geophysics

Fundamental principles of geophysical methods commonly used for subsurface exploration, including: gravity, magnetic, seismic and electrical measurements. Emphasis on field procedures and interpretation techniques used for geologic investigations. Lecture and three laboratory hours per week.

Prerequisite: 311

Departments

475, 476, 477, 478 **Experiential Learning**

See the description of these courses at the beginning of the “Departments and Curricula” section of this catalog.

483, 484, 485, 486 **Seminar**

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German

Greek

See Department of Modern and Classical Languages.

Health and Human Performance

Parsley (chair), Carey, Derry, Duoos, Grochowski; Andregg, Casey, Flood, Hodgson, Jones, Mathre, Ofstead, Rinehart, Skrypek, Stenzel, Sweeney, Tallman

The Department of Health and Human Performance offers the following undergraduate professional programs of study including a basic instructional program:

1. A major in physical education which leads to licensure at both the elementary and secondary levels;
2. A major in health education, which leads to licensure at the middle and secondary school levels;
3. A major in community health education, which prepares the student for work in community health;
4. A major in health promotion which prepares the student for work as a fitness specialist outside the school setting;
5. A major in health promotion science which prepares the student for entrance into a masters of physical therapy program;
6. A concentration in Athletic Training Internship Program which prepares the student for taking the NATA exam;
7. A non-teaching major in physical education for students who have career objectives other than teaching.
8. Individual programs that may be developed in consultation with the department chair.

The basic instructional program provides an opportunity for all students to develop a knowledge and understanding of the value and methods of obtaining and maintaining an appropriate level of physical fitness throughout one's lifetime.

Students graduating with a major in health education will be able to effectively apply the knowledge and skills required for conducting the teaching-learning process in health education.

Students graduating with a major in community health will be able to effectively apply the knowledge and skills required in community health education settings.

Students graduating with a major in health promotion will have had experience at a work site. They will demonstrate the skill and knowledge expected of the entry-level exercise science professional in the areas of fitness evaluation, exercise prescription and delivery of exercise programs to normal and special populations. They will effectively assess theory and interface it with practice.

Students graduating with a major in physical education will be able to effectively make application of the skills required for conducting the teaching-learning process in an extended practicum setting. They will effectively demonstrate the skill and knowledge to evaluate the teaching-learning process, the analysis of motor performance, and an assessment of theory to interface it with practice.

The department also offers a course to fulfill the Health and Fitness component of the core curriculum.

Teacher Licensure

Major in Health Education (5-12)

Major in Physical Education (K-12)

See Department of Teacher Education

Major in Community Health Education

HLTH 345 Nutrition for Health and Fitness

HLTH 350 Personal Health and Wellness

HLTH 353 Consumer, Community and Environmental Health