Geoscience (GEOSCI)

Courses

GEOSCI 102. Natural Hazards. 3 Credits.
Explores the dynamic character of the Earth System by characterizing and understanding the causes and consequences of natural hazards. Hazards considered will include earthquakes, tsunamis, volcanic hazards (local, regional, global scales), meteorological hazards (hurricanes, tornadoes, flooding, coastal erosion), and landslides.
Fall and Spring.

GEOSCI 198. First Year Seminar. 3 Credits.
Reserved for New Incoming Freshman.

GEOSCI 202. Physical Geology. 4 Credits.
Description and analysis of the geological processes that shape the earth's major internal and external features. Origins, properties and use of the earth's rock and mineral resources. Students will not receive credit for both Geosci 202 and Geosci 102.
Fall and Spring.

GEOSCI 203. Earth System History. 3 Credits.
The physical history of the Earth through geologic time and the attendant evolution of biological organisms; principles governing interpretation of the rock and fossil record; unraveling of events culminating in modern landscape and life forms.
P: Geosci 202 with at least a C grade.
Spring.

GEOSCI 204. Earth System History Laboratory. 1 Credit.
Practical application of geologic principles and techniques to interpretation of Earth history. Introduction to stratigraphic principles, sedimentary environments, and fossil identification.
P: Geosci 203 with at least a C grade or conc enr.
Spring.

GEOSCI 222. Ocean of Air: Weather and Climate. 3 Credits.
Fundamental processes of the atmosphere, the resulting weather and climate, and the effects of the atmosphere on other aspects of the earth's environments and on humans.
Fall and Spring.

GEOSCI 298. Independent Study. 1-4 Credits.
Independent study is offered on an individual basis at the student's request and consists of a program of learning activities planned in consultation with a faculty member. A student wishing to study or conduct research in an area not represented in available scheduled courses should develop a preliminary proposal and seek the sponsorship of a faculty member. The student's advisor can direct him or her to instructors with appropriate interests. A written report or equivalent is required for evaluation, and a short title describing the program must be sent early inthe semester to the registrar for entry on the student's transcript.
P: fr or so st with cum gpa > or = 2.50; or jr or sr st with cum gpa > or = 2.00.
Fall and Spring.

GEOSCI 299. Travel Course. 1-4 Credits.
Travel courses are conducted to various parts of the world and are led by one or more faculty members. May be repeated to different locations.
P: cons of instr & prior trip arr & financial deposit.

GEOSCI 301. Introduction to Geoscience Field Methods. 2 Credits.
A survey of methods of field investigations including description and measurement of rock sequences, introduction to geological mapping, surveying, and writing geological reports.
P: Geosci 202.
Spring Odd.

GEOSCI 325. Regional Climatology. 3 Credits.
The elements, controls, and classification of climates; the distribution of climate types over the earth; world patterns of climate.
REC: Geosci 222.
Fall Even.

GEOSCI 340. Introduction to Mineralogy & Petrology. 4 Credits.
Explores mineral chemistry and structures, identification, association, and occurrence. Surveys the distribution, chemistry, and mineral associations in relation to tectonic environment to interpret rock forming processes.
P: Geosci 202 with at least a C grade.
Fall Even.

GEOSCI 350. Structural Geology and Geodynamics. 3 Credits.
How do rocks fracture? How do rocks flow? How is heat transmitted from the core to the crust? This class is a survey of the deformation and dynamics of Earth. We will focus on the stress-strain relationship and deformation styles of Earth materials, as well as the transport of heat and mass by Earth processes.
P: GEOSCI 202. REC: MATH 202
Fall Odd.

GEOSCI 402. Sedimentology & Stratigraphy. 3 Credits.
Modern concepts and techniques used to study and interpret the origins and distribution of sediments and sedimentary rocks; principles of bio-stratigraphy and physical stratigraphy and sedimentology.
P: Geosci 202 with at least a C grade and 203 with at least a C grade.
Fall Odd.

GEOSCI 432. Hydrogeology. 3 Credits.
Introduction to the geological and physical principles governing ground water flow. Description of aquifer properties, chemical processes, equation of flow, well hydraulics, and environmental concerns.
P: Geosci 202 with at least a C grade; REC: Env Sci 330 with at least a C grade; Math 202.
Spring.

GEOSCI 450. Ore Deposits. 3 Credits.
This course is a survey of economically important Earth materials. How do ore bodies form? What are they used for? What strategies can we use to extract the ore? Additionally, we will also focus on the environmental impacts from extraction and what can be done as possible remediation strategies.
P: GEOSCI 202. REC: GEOSCI 340
Spring Even.

GEOSCI 470. Quaternary Geology. 3 Credits.
Understanding the extremes in environmental behavior which characterize Pleistocene time. Principles of glaciology and the impact of glaciation on the landscape.
P: Geosci 202 with at least a C grade; REC: Geosci 203.
Spring Even.

GEOSCI 478. Honors in the Major. 3 Credits.
Honors in the Major is designed to recognize student excellence within interdisciplinary and disciplinary academic programs.
P: min 3.50 all cses req for major and min gpa 3.75 all UL cses req for major.

GEOSCI 492. Special Topics in Geoscience. 1-4 Credits.
Topics not covered by regular courses, such as crustal movements, stable isotopes in the environment, geology of Wisconsin, and others. Offerings of different topics can be repeated for credit.
Spring.

GEOSCI 497. Internship. 1-12 Credits.
Supervised practical experience in an organization or activity appropriate to a student's career and educational interests. Internships are supervised by faculty members and require periodic student/faculty meetings.
P: jr st.
Fall and Spring.

GEOSCI 498. Independent Study. 1-4 Credits.
Independent study is offered on an individual basis at the student's request and consists of a program of learning activities planned in consultation with a faculty member. A student wishing to study or conduct research in an area not represented in available scheduled courses should develop a preliminary proposal and seek the sponsorship of a faculty member. The student's advisor can direct him or her to instructors with appropriate interests. A written report or equivalent is required for evaluation, and a short title describing the program must be sent early inthe semester to the registrar for entry on the student's transcript.
P: fr or so st with cum gpa > or = 2.50; or jr or sr st with cum gpa > or = 2.00.
Fall and Spring.

GEOSCI 499. Travel Course. 1-6 Credits.
Travel courses are conducted to various parts of the world and are led by one or more faculty members. May be repeated to different locations.
P: cons of instr & prior trip arr & financial deposit.