GEOLOGY (GEOL)

Courses

**GEOL 3010 Process Geomorphology (4 Credits)**
The land surface of Earth is continuously altered by geomorphic processes. This class focuses upon the nature of these processes, the work that they perform and the resulting landforms. In addition, the student becomes familiar with various methods of geomorphic analysis through the laboratory component of the class. Cross listed with GEOG 3910. Prerequisite: GEOL 1010, GEOG 1202 or permission of instructor.

**GEOL 3100 Environmental Geology (4 Credits)**
Environmental geology examines geologic hazards, both natural and those attributable to human impacts on the environment from urban and regional development. Specific topics may include disposal of municipal solid waste and radioactive waste, flood, earthquake, volcanic hazards; groundwater pollution and withdrawal; mass-wasting phenomena; and energy-related issues. Prerequisite: GEOL 1010, GEOG 1203 or instructor’s permission.

**GEOL 3200 Sedimentology/Stratigraphy (4 Credits)**
This course reviews the origin, geologic history, and depositional environments of sediments and sedimentary rocks. Course work concentrates on the identification of sedimentary rocks and depositional environments by first-hand observations of rocks in the Denver area. Prerequisite: GEOL 1010, GEOG 1203 or instructor’s permission.

**GEOL 3300 Petroleum Geology (4 Credits)**
This class examines the geological occurrences of petroleum including the origin, migration, and accumulation of oil and natural gas. This class differs from traditional petroleum geology classes by offering an examination of the economics and politics underlying the oil and gas industry, and by considering alternatives to traditional hydrocarbon resources. Prerequisite: GEOL 1010, GEOG 1203 or instructor’s permission.

**GEOL 3520 Erosion Process & Measurement (4 Credits)**
Soil erosion is arguably the most serious environmental problem worldwide. This course focuses upon the significance of this problem, the factors affecting erosion rates, the nature of the processes themselves, methods of measurement, estimation of erosion rates and erosion control practices. Prerequisites: GEOG 1203, GEOG 1218, or GEOG 1266.

**GEOL 3540 Hydrology (4 Credits)**
This course provides an overview of the hydrologic cycle with emphasis placed on the study of applied hydrology. Discussions include the fundamental characteristics of precipitation, runoff processes, calculation of flood hazards, aquifers (porosity and permeability), the geologic settings of groundwater, the basic physics of groundwater flow, and water supply and use. Prerequisite: GEOL 1010, GEOG 1203 or instructor’s permission. Recommended prerequisite: one introductory statistics course.

**GEOL 3900 Geomorphology Seminar (1-5 Credits)**
Hill slopes comprise the vast majority of the Earth’s land surface. It is upon these surfaces that nearly all of the human population must exist and, hopefully, flourish. Hill slopes assume various forms, and their shape influences their utility for various human endeavors. Numerous geomorphic processes operate upon hill slopes to determine their form, and human activities strongly influence the frequency and magnitude of these geomorphic processes. Consequently, hill slopes are an interface between the Earth and the human population. Prerequisite: GEOL 3010 or permission of instructor.

**GEOL 3991 Independent Study (1-5 Credits)**