

GEOSCIENCES

Program Description

The Department of Physical and Environmental Sciences offers three concentrations and three minors within Geosciences.

Geoscience instruction takes place in a state-of-the-art science complex, which houses several instructional laboratories, a projects room, a computer applications laboratory, a petrology-mineralogy laboratory, rock storage facilities and a sample preparation room.

Most classes have a strong field component so that students experience the diverse geological setting of the Grand Junction area. Equipment available includes a computer-assisted X-ray diffractometer, an X-ray fluorescence spectrometer, research petrographic microscopes, binocular microscopes, a scanning-electron microscope (available through the biology department), GPS units, short-period and long-period seismometers and a magnetometer. Computer facilities include modern PC systems with software basics for communications, database management, word-processing, geographic information systems (GIS) and geostatistics.

Geology

The geology concentration is designed for students who (1) desire a strong liberal arts education with emphasis on the earth sciences, (2) wish to pursue a graduate degree in geology, or (3) desire a professional or technical geoscience career. Recent graduates are attending graduate programs at major universities or have entered the work force as geological technicians or professional geologists.

Environmental Geology

The environmental geology concentration is designed for students who (1) desire a strong liberal arts education with emphasis on environmental issues within the earth sciences, (2) wish to pursue a graduate degree in environmental geology, or (3) desire a professional or technical career. The environmental geology concentration has the same basic framework as the geology concentration, but has a stronger emphasis on geologic hazards, ground-water and surface-water hydrology, low-temperature geochemistry, biological systems and environmental science. Recent graduates are attending graduate programs at major universities or have entered the work force as geological technicians or professional geologists.

Geology–Secondary Education

The geology secondary education licensure concentration is structured for graduates to pursue teaching careers at the middle or high school level. The basic curriculum includes all of the major topics within a traditional geology program while also incorporating teacher education courses required for licensure by the state of Colorado.

A minimum of 75 credit hours of essential learning and content area coursework must be completed with a minimum GPA of 2.80 before a candidate may apply to the Center for Teacher Education secondary licensure program. Please contact the Center for Teacher Education for further information on admissions criteria.

Geology Minor

The geology minor is designed for students who wish to take additional basic geology courses in support of their degree aspirations in other

areas. A geology minor can be a valuable complement to majors in the other science disciplines and archaeology.

Watershed Science Minor

Many geology students complete the Watershed Science (<http://catalog.coloradomesa.edu/areas-study/watershed-science>) minor, which prepares them to serve the regional need for scientists with a strong background in water-related issues.

Geographic Information Systems and Technology Minor and Certificate

Many geoscientists use geographic information systems in their work. Students can learn this technology by pursuing the minor or certificate in Geographic Information Systems and Technology (<http://catalog.coloradomesa.edu/areas-study/geographic-information-science-technology>).

Contact Information

Department of Physical and Environmental Sciences
Wubben Science 232
970.248.1993

Associates

- Geology, Liberal Arts (AS) (<http://catalog.coloradomesa.edu/areas-study/geosciences/geology-liberal-arts-as>)

Bachelors/Minors

- Education: Secondary Education, Geosciences (BS) (<http://catalog.coloradomesa.edu/areas-study/geosciences/secondary-education-geosciences-bs>)
- Environmental Geology, Geosciences (BS) (<http://catalog.coloradomesa.edu/areas-study/geosciences/environmental-geology-geosciences-bs>)
- Geology (Minor) (<http://catalog.coloradomesa.edu/areas-study/geosciences/geology-minor>)
- Geology, Geosciences (BS) (<http://catalog.coloradomesa.edu/areas-study/geosciences/geology-geosciences-bs>)
- Watershed Science (Minor) (<http://catalog.coloradomesa.edu/areas-study/geosciences/watershed-science-minor>)