Geosciences (B.A., B.S.)

Department of Geosciences



Geoscientists want to know more about the big picture of Earth and why it exists the way it does today. They investigate natural disasters such as earthquakes and volcanoes, they explore life in extreme environments such as hydrothermal vents or in far-removed caves, and they examine processes such as water treatment and carbon cycling. This work involves understanding how geology, chemistry, physics, and biology intersect, both today and throughout the Earth's history.

PennState
College of Earth
and Mineral Sciences

Visit: www.ems.psu.edu/academics/find-program-study/geosciences-ba-bs



Overview

The geosciences are concerned with understanding Earth processes and the evolutionary history of our planet. Geoscientists work to discover and develop natural resources such as groundwater, metals, and energy sources; to solve technology-generated environmental problems such as acid mine drainage and waste disposal; to predict geological events, such as the occurrence of earthquakes and volcanism; and to solve fundamental questions concerning the origin and evolution of Earth and life. Our degree programs stress data collection; investigation, analysis, and synthesis of information related to complex natural problems; and rigor of thought and clarity of oral and written expression.

The B.A. program stresses data collection; investigation, analysis, and synthesis of information related to complex natural problems; rigor of thought; and clarity of oral and written expression. Examples of these careers include environmental law; national and international planning or resource management; and K-12 teaching.

The B.S. provides a broad foundation in the physical and natural sciences for students who seek immediate



employment or post-graduate education in several areas of the geosciences. Examples of careers include the petroleum and mining industries; local or federal resource management; water resources, treatment and management; energy and environmental industries; and academia.

You might be a good fit if ...

- You are fascinated by volcanoes, earthquakes, rocks, glaciers, climate change, fossils, tectonic plates, or the evolution of life.
- You like big picture thinking and want to explore Earth's developmental processes.
- You enjoy working in nature or a laboratory (not all geosciences is outdoors!).
- You are analytical and like to piece together clues to paint a picture of the planet's past.



From day one, the Geoscience Department demonstrates care for all students to ensure success. Whether it's extracurricular or academic, EMS has always supported me in taking advantage of any opportunity Penn State has to offer.

~Amanda Urist

- You like applying basic science skills to explore the natural world.

Internships and scholarships

The College of Earth and Mineral Sciences awards more than $2.5 million annually, including more than $92,000 for those interested in Geosciences.

Choose from options

- General
- Hydrogeology
- Integrated B.S./M.S. Degree Program

Why choose Penn State?

Our geoscientists piece together a picture of Earth's changing environments. This involves field work, laboratory work, or a combination. Geoscientists seek to understand how our Earth developed into the way it is today, which can help us understand what we can expect in the Earth's future.