

# Geology

## Bachelor of Science

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### What is Geology?

Geology is the study of the structure, evolution and history of Earth and its mineral and energy resources. The field of Geology analyzes the processes that have shaped the Earth, using rocks and minerals to reconstruct that history.

Geology students at Mines can take advantage of the rich geological and paleontological resources of the region. They also can access the extensive fossil and mineral collections of the Museum of Geology. Students also can work at the Sanford Underground Research Facility, model earthquakes and volcanic eruptions, reconstruct the early history of the solar system through experimental petrology, and excavate and prepare fossils ranging from dinosaurs to saber-tooth cats.

### What does a geologist do?

Geologists study the processes shaping the earth today and throughout its history. Geologists study how the earth was formed, how it has developed and how life has evolved in reaction to tectonic and climatic changes. In their careers, geologists may seek to understand the formation of natural resources such as minerals or petroleum, protect water and soil resources, or investigating geologic hazards like earthquakes and volcanoes.

The Geology program at South Dakota Mines takes advantage of the proximity of the Black Hills through a rigorous field-based education that provides students a unique blend of hands-on experiences with strong theoretical foundations.

### Careers

Some duties a professional geologist might do on the job include:

- Plan and carry out field studies to collect data and samples
- Use a variety of data sources, such as satellite images, geophysical data, rock samples, and geologic maps to locate natural resources
- Conduct laboratory tests on samples collected in the field
- Make geologic maps and cross sections
- Prepare written scientific reports
- Present their findings to clients, colleagues and the public



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For more information: <https://www.sdsmt.edu/Academics/Degrees/Geology/>

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