

# Geological Engineering

## Bachelor of Science

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### What is Geological Engineering?

Geological engineering involves the engineering of natural materials with applications to geology and engineering fields such as civil, mining, environmental, and petroleum. It is the development and conservation of natural resources in ways useful to humankind. It encompasses diverse fields such as groundwater resources, subsurface contamination, slope stability, environmental site design, and mineral and petroleum exploration and production.

Geological engineering is a relatively rare degree program offered by only 13 universities in the country. The degree bridges the gap between the science of Geology and multiple engineering disciplines including mining, civil, petroleum, and environmental engineering.

### What does a geological engineer do?

Graduates of the geological engineering program work in the areas of groundwater, environmental site planning and natural hazards, geomechanics and geotechnics, and fuels or minerals.

The average starting salary for a 2018-2019 Mines geological engineering graduate was \$58,429. Many go on to graduate school. The job placement rates of 2018-19 SD Mines geological engineering graduates was 100%.

### Careers

Job duties of a geological engineer might include:

- Assessing the quality of rock, soil, water and other site conditions
- Completing site analyses and foundation designs
- Assisting in the design of structures
- Conducting lab analyses of earth materials
- Assisting in the design of safe and efficient mines
- Delineating and extracting energy resources
- Modeling and protecting groundwater and surface water resources
- Mitigating against geologic hazards
- Providing solutions to problems related to land reclamation, water and air pollution, and sustainability



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For more information: <https://www.sdsmt.edu/Academics/Degrees/Geological-Engineering/>

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