

# Geological Engineering

College of Engineering and Mines  
Department of Mining and Geological Engineering  
907-474-7388  
[www.alaska.edu/uaf/cem/ge/](http://www.alaska.edu/uaf/cem/ge/)

## M.S. Degree

Minimum Requirements for Degree: 30 – 33 credits

Geological engineering deals with the application of geology. Geological engineers work with the environment in the true sense of the word. Properties of earth materials exploration activities, geophysical and geochemical prospecting, site investigations and engineering geology are all phases of geological engineering.

The graduate program prepares students for employment with industry, consulting companies and government agencies.

### Graduate Program — M.S. Degree

1. Complete a comprehensive entrance exam.
2. Complete the general university requirements (page 192).
3. Complete the master's degree requirements (page 196).
4. Complete the thesis or non-thesis requirements:

#### Thesis

- a. Complete 12 credits from the following six courses:
  - GE F620—Advanced Groundwater Hydrology .....3
  - GE F630—Advanced Applied Mining Geology.....3
  - GE F635—Advanced Geostatistical Applications .....3
  - GE F665—Advanced Geomaterial Engineering .....3
  - GE F666—Advanced Engineering Geology .....3
  - MIN F621—Advanced Mineral Economics.....3
- b. Geological engineering courses and technical electives .....11
  - GE F692—Graduate Seminar .....1
  - GE F699—Thesis.....6
- c. Minimum credits required .....30

#### Non-Thesis

- a. Complete 12 credits from the following six courses:
  - GE F620—Advanced Groundwater Hydrology .....3
  - GE F630—Advanced Applied Mining Geology.....3
  - GE F635—Advanced Geostatistical Applications .....3
  - GE F665—Advanced Geomaterial Engineering .....3
  - GE F666—Advanced Engineering Geology .....3
  - MIN F621—Advanced Mineral Economics.....3
- b. Geological engineering courses and technical electives .....14
  - GE F692—Graduate Seminar .....1
  - GE F698—Research/Project.....6
- c. Minimum credits required .....33