

# Geological Engineering

College of Engineering and Mines  
Department of Mining and Geological Engineering  
(907) 474-7388  
[www.uaf.edu/sme/GeolEng.html](http://www.uaf.edu/sme/GeolEng.html)

## 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 168).
3. Complete the master's degree requirements (page 172).
4. Complete the thesis or non-thesis requirements:

### Thesis

- a. Complete the following:
  - GE 635—Geostatistical Ore Reserve Estimation (3)  
or MIN 621—Advanced Mineral Economics (3)..... 3
  - GE 620—Advanced Groundwater Hydrology..... 3
  - GE 630—Advanced Applied Mining Geology ..... 3
  - GE 666—Advanced Engineering Geology ..... 3
  - Geological engineering courses and technical electives..... 12
  - GE 699—Thesis ..... 6
- b. Minimum credits required ..... 30

### Non-Thesis

- a. Complete the following:
  - GE 635—Geostatistical Ore Reserve Estimation (3)  
or MIN 621—Advanced Mineral Economics (3)..... 3
  - GE 620—Advanced Groundwater Hydrology..... 3
  - GE 630—Advanced Applied Mining Geology ..... 3
  - GE 666—Advanced Engineering Geology ..... 3
  - Geological engineering courses and technical electives..... 15
  - GE 698—Research/Project ..... 6
- b. Minimum credits required ..... 33

*Note: Page numbers refer to the UAF 2005-2006 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).*