M.S., GEOLOGICAL ENGINEERING

Complete one of the following admission requirements:

- Complete a bachelor’s degree in geological engineering;
- Complete a bachelor’s degree in engineering and complete the following courses:

  Select one of the following:
  - GEOS F262 and GEOS F332: Rocks and Minerals and Ore Deposits and Structure
  - GEOS F322 and GEOS F314: Stratigraphy and Sedimentation and Structural Geology
  - GE F365: Geological Materials Engineering
  - or MIN F370: Rock Mechanics
  - GE F405 and GE F420: Exploration Geophysics and Subsurface Hydrology

  Total Credits: 15-17

- Complete a bachelor’s degree in geology and complete the following courses:

  - ES F208: Mechanics
  - ES F331: Mechanics of Materials
  - ES F341: Fluid Mechanics
  - GE F365: Geological Materials Engineering
  - or MIN F370: Rock Mechanics
  - GE F405: Exploration Geophysics
  - GE F420: Subsurface Hydrology
  - MIN F408: Mineral Valuation and Economics

  Total Credits: 23

- Complete a bachelor’s degree in the natural sciences and complete the following:

  - ES F208: Mechanics
  - ES F331: Mechanics of Materials
  - ES F341: Fluid Mechanics
  - Select one from the following:
    - GEOS F262 and GEOS F332: Rocks and Minerals and Ore Deposits and Structure
    - GEOS F322 and GEOS F314: Stratigraphy and Sedimentation and Structural Geology
    - GE F365: Geological Materials Engineering
    - or MIN F370: Rock Mechanics
    - GE F405: Exploration Geophysics
    - GE F420: Subsurface Hydrology
    - MIN F408: Mineral Valuation and Economics

  Total Credits: 29-31

Submit GRE scores.

Thesis Option

Minimum Requirements for Degree: 30 credits

General University Requirements

Complete the general university requirements. (http://catalog.uaf.edu/graduate)

Master’s Degree Requirements

Complete the master’s degree requirements. (http://catalog.uaf.edu/graduate/#Masters)

Thesis Requirements

Select four from the following:

- GE F430: Geomechanical Instrumentation
- GE F440: Slope Stability
- GE F610: Subsurface Hydrology
- GE F620: Advanced Groundwater Hydrology
- GE F622: Advanced Soil Physics
- GE F624: Stochastic Hydrology and Geohydrology
- GE F626: Thermal Geotechnics
- GE F635: Advanced Geostatistical Applications
- GE F665: Advanced Geological Materials Engineering
- GE F666: Advanced Engineering Geology
- GE F668: Tunneling Geotechniques
- MIN F621: Advanced Mineral Economics
- MIN F673: Advanced Rock Mechanics
- Geological engineering courses and technical electives
- GE F692: Graduate Seminar
- GE F699: Thesis

Total Credits: 30

Non-Thesis Option

Minimum Requirements for Degree: 33 credits

General University Requirements

Complete the general university requirements. (http://catalog.uaf.edu/graduate)

Master’s Degree Requirements

Complete the master’s degree requirements. (http://catalog.uaf.edu/graduate/#Masters)

Non-Thesis Requirements

Select five from the following:

- GE F430: Geomechanical Instrumentation
- GE F440: Slope Stability
- GE F610: Subsurface Hydrology
- GE F620: Advanced Groundwater Hydrology
- GE F622: Advanced Soil Physics
- GE F624: Stochastic Hydrology and Geohydrology
- GE F626: Thermal Geotechnics
- GE F635: Advanced Geostatistical Applications
- GE F665: Advanced Geological Materials Engineering
- GE F666: Advanced Engineering Geology
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<tr>
<th>Course Code</th>
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<tr>
<td>GE F668</td>
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<td>MIN F621</td>
<td>Advanced Mineral Economics</td>
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<td><strong>Geological engineering courses and technical electives</strong></td>
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<td>Graduate Seminar</td>
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<td>Non-Thesis Research/Project</td>
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