

Geophysics

College of Natural Science and Mathematics
Department of Geology and Geophysics
907-474-7565
www.uaf.edu/geology/

M.S., Ph.D. Degrees

Minimum Requirements for Degrees: M.S.: 30 credits; Ph.D.: 18 thesis credits

Graduate Program — M.S. Degree

Concentrations: Solid-Earth Geophysics; Snow, Ice and Permafrost Geophysics; Remote Sensing Geophysics

- Complete the following admission requirements:
 - Submit GRE scores.
 - Complete a background at least to the level of a B.S. concentration in geology, geophysics or an appropriate physical science or engineering.
 - Complete MATH F421 and MATH F422; or equivalent.
- Complete the general university requirements (page 201).
- Complete the master's degree requirements (page 205).
 - Complete 6 – 12 thesis credits.
 - Complete any deficiencies concurrently with this degree.
- Submit a written thesis proposal and pass an oral comprehensive examination centered on this proposal.
- Complete and submit a written thesis and pass an oral defense of thesis.
- Complete 6 credits of the following geophysics core requirements:

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|---|---|
| GEOS F602—Geophysical Fields | 3 |
| GEOS F620—Geodynamics | 3 |
| GEOS F654—Visible and Infrared Remote Sensing | 3 |
| GEOS F657—Microwave Remote Sensing | 3 |
- Complete one of the following concentrations:

Solid-Earth Geophysics

 - Complete 6 credits from the following:

| | |
|---|---|
| GEOS F604—Intermediate Seismology | 3 |
| GEOS F605—Geochronology | 3 |
| GEOS F613—Global Tectonics | 3 |
| GEOS F655—Tectonic Geodesy | 3 |
| GEOS F671—Volcano Seismology | 3 |
 - Minimum credits required

Snow, Ice and Permafrost Geophysics

- Complete 6 credits from the following:

| | |
|-----------------------------|---|
| GEOS F614—Ice Physics | 3 |
| GEOS F615—Sea Ice | 3 |
| GEOS F616—Permafrost | 3 |
| GEOS F617—Glaciers | 3 |
- Minimum credits required

Remote Sensing

- Complete 7 credits from the following list:

| | |
|---|---|
| GEOS F654—Visible and Infrared Remote Sensing | 3 |
| GEOS F657—Microwave Remote Sensing | 3 |
| GEOS F622—Digital Image Processing in the Geosciences | 3 |
| GEOS F434/F634—Remote Sensing of the Cryosphere | 4 |
| GEOS F484/F684—Remote Sensing Bi-Weekly Seminar | 1 |
| GEOS F676—Remote Sensing of Volcanic Eruptions | 3 |
| GEOS F639—InSAR and its Applications | 3 |
| ATM F413/F613—Atmospheric Radiation | 3 |
- Complete 6 credits from relevant geology and geophysics courses as agreed by the advisory committee.
- Minimum credits required

Graduate Program — Ph.D. Degree

- Complete the following admission requirement:
 - Submit GRE scores.
- Complete the general university requirements (page 201).
- Complete the course work requirements for the appropriate M.S. concentration.
- Complete the Ph.D. degree requirements (page 206).
- As part of the Ph.D. degree requirements, complete the following:
 - Complete and pass a written and oral comprehensive examination.
 - Complete and submit a written thesis proposal for approval.
 - Complete a research program as arranged with the graduate advisory committee.
 - Complete 18 credits of thesis, write a thesis and pass an oral defense of thesis.
- Minimum credits required