

# GEOPHYSICS

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## M.S., Ph.D. Degrees

The geophysics program at UAF is closely connected with the Geophysical Institute and is optimally positioned to investigate a wide array of geophysical phenomena. Students have the option to obtain a general geophysics degree or to choose one of three concentrations to focus their studies.

Upon graduation, a student is expected to be able to:

1. address geophysical problems using the principles of conservation of energy, mass and momentum using both physical and mathematical concepts, particularly with respect to mathematical techniques such as linear algebra, vector calculus and partial differential equations;
2. explain physical processes underlying the Earth's global-scale features, including plate tectonics and the gravitational and magnetic fields;
3. describe common geophysical problems and assess the advantages and disadvantages of various theoretical, modeling or observational approaches to solving them, including identifying key assumptions underlying each approach;
4. frame well-defined scientific research questions and apply modern computational methods and observational techniques necessary to conduct the research;
5. publish and present results in peer-reviewed articles, scientific reports, and at national and international scientific meetings using oral and written skills developed through regular faculty feedback.

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

College of Natural Science and Mathematics  
Department of Geosciences (<http://www.uaf.edu/geology/>)  
907-474-7565

## Programs Degrees

- M.S., Geophysics (<https://catalog.uaf.edu/archives/2020-2021/graduate/graduate-degree-programs/geophysics/ms/>)
- Ph.D., Geophysics (<https://catalog.uaf.edu/archives/2020-2021/graduate/graduate-degree-programs/geophysics/phd/>)