

Geology & Geophysics

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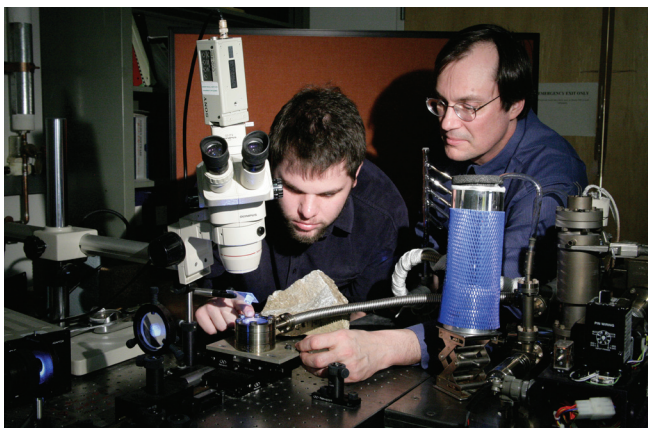
Degree Programs

B.A. Earth Science

Geology is the study of earth history and the processes that have formed and modified it over time. The Earth Science program provides training in various aspects of our natural world and is especially applicable to those wishing to teach earth science or who are entering a field such as resource management where broad earth science training is important.

B.S. Geology

Graduates in geology build their studies of the earth on a firm foundation of math, physics & chemistry. The suggested curriculum is intended to be flexible enough to allow students to pursue their own emphases in the junior and senior years. The B.S. degree prepares students for positions with industry or government, or for graduate studies.



Geology student John Sommerfeld and Professor of Geophysics and Interim Dean Paul Layer working in the Geophysical Institute Geochronology Laboratory on a project determining the ages of rocks from Interior Alaska using single grain laser heating. Photo Credit: UAF Center for Research Services photo © Jim Barker

M.S. & Ph.D. Geology

Graduates in geology develop a specialty in their field by working closely with faculty and research scientists at UAF. There are about 40 professional geoscientists in residence on campus and graduate students normally participate in the ongoing research of these professionals. Teaching and research assistantships are available on campus. Graduate students working on a geology degree can specialize in one of six areas of concentration:

- General Geology
- Economic Geology
- Petroleum Geology
- Quaternary Geology
- Remote Sensing
- Volcanology

M.S. & Ph.D. Geophysics

Students working on a graduate degree in geophysics can specialize in one of three areas of concentration:

- Solid-Earth Geophysics
- Snow, Ice and Permafrost Geophysics
- Remote Sensing Geophysics

About the Department

The highest mountain in North America dominates the landscape south of our Fairbanks campus. These mountains remind us that Alaska is one of the most geologically active regions of the Earth. Scientists in our department are studying the formation of these mountains, the mechanics of earthquakes, volcanoes, glaciers and the age and distribution of different rock types across Alaska and other regions. We use these studies to reconstruct Alaska's ancient geological history and to identify geological hazards and resources.

As an undergraduate major in our department, you'll become a part of our close knit teaching and research team. We offer a broad curriculum of courses that will prepare you for a career in the earth sciences or further graduate training. In small upper division classes, you'll get to know our professors well and interact with our graduate students. As you progress, you'll find many opportunities to participate in ongoing research projects. Most of our graduates go on for advanced degrees or find employment in private industry, government or educational institutions.

Our department is in the Reichardt Building on the UAF campus. We have state-of-the-art classrooms, laboratories, computer facilities and study areas to support your education. The Departments of Physics and Chemistry are also located in the building. Our students take a range of courses from these departments in support of their scientific education.



Assistant Professor Paul McCarthy works with students in his basic geology class observing features of the rock wall bordering Alumni Drive near UAF campus. Photo by Todd Paris, UAF Marketing and Communications

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