

CAREERS IN

GEOLOGY & GEOPHYSICS

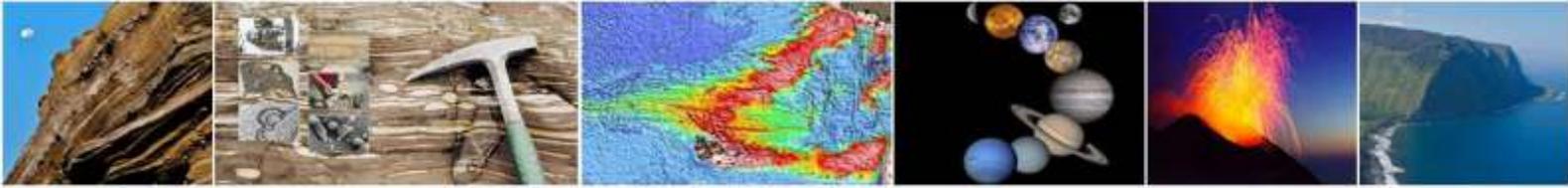
IS A CAREER IN GEOLOGY & GEOPHYSICS RIGHT FOR YOU?

Do you live near a volcano? Have you ever experienced an earthquake? Ever wondered how the Hawaiian islands were created, or when the next island will form? Do you like looking at pictures of the surface of the moon or Mars? Are you interested in fossils? Have you used Google Earth to explore the 'dry' Earth or the underwater world? Do you ever wonder where our drinking water comes from? If you answered "yes" to any of these questions, then come and explore a career in geology and geophysics.

WHAT FIELDS OF GEOLOGY & GEOPHYSICS ARE THERE?

- ▶ **Hydrologists** are concerned with problems of water supply, quality and management.
- ▶ **Marine Geologists and Geophysicists** investigate the ocean floor and coastal margins.
- ▶ **Mineralogists** examine minerals found in rocks and try to figure out how they formed.
- ▶ **Paleontologists** study fossils to determine how and when extinct organisms lived and evolved.
- ▶ **Petroleum and Economic Geologists** locate fuel and mineral resources, and evaluate how they can best be extracted and utilized.
- ▶ **Seismologists** monitor earthquakes and tsunamis, and model the Earth's interior.
- ▶ **Engineering Geologists** study landslides and evaluate land stability for the construction industry to determine where to build houses.
- ▶ **Volcanologists and Volcano Geophysicists** monitor active volcanoes to predict eruptions and volcano-generated earthquakes and tsunamis.
- ▶ **Planetary Geologists and Geophysicists** analyze the surfaces and interiors of the moons and planets in the solar system.
- ▶ **Astrobiologists** investigate life in extreme environments on Earth, and search for extraterrestrial life.





WHAT KINDS OF JOBS CAN YOU GET AS A GEOLOGIST OR GEOPHYSICIST?

- ▶ Geologists (and Geophysicists) are essentially **research scientists** who seek to understand the world around them. They possess inquiring minds and are interested in science and the environment. Most geologists enjoy the variety that they experience in their jobs – they perform many different tasks and travel to interesting places. Geologists spend some time **in the field, in laboratories, and in offices**, but the amount of time spent in each of these work environments varies.
- ▶ Geologists work for **private industry, for state and federal agencies, for universities and colleges**, and even **for museums** as consultants. They work as part of teams that can include data systems analysts, technicians, environmental engineers, metallurgists, biologists, astronomers, chemists, physicists, geographers, and science writers.
- ▶ Geological specialists are used extensively in the **aerospace industry**, in the evaluation of **extraterrestrial data** and in the planning of future missions.
- ▶ Employment opportunities in the field are projected to increase with growing **global demands for energy, drinking water, and a cleaner world**.

WHAT ARE THE BASIC ACADEMIC REQUIREMENTS?

A bachelor degree is the minimum educational requirement for any position as a geologist or geophysicist. However, beginning positions in research, teaching, and exploration usually require a master's degree. Typically, a doctorate is necessary to develop and lead research projects, or to teach at the college level.

A high school student should prepare for a career in geology and geophysics by following a diversified college-preparatory curriculum that includes courses in chemistry, physics, and mathematics. Geology typically requires more chemistry (or even biology), whereas geophysics requires more mathematics and physics. Courses in writing and computer science are also useful in these interdisciplinary fields.

WANT MORE INFORMATION?

Contact the Department of Geology and Geophysics at the University of Hawai'i at Mānoa. The department offers a Bachelor of Arts degree in Geology and a Bachelor of Science, Master of Science, and Doctorate degrees in Geology and Geophysics.

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