Geophysics

Career Compass Geosciences

This career compass provides options, tips, suggestions, and strategies for how a student can obtain critical skills, experiences, and competencies in order to launch their geoscience career based on their academic standing. The content herein is based on data from the U.S. Bureau of Labor Statistics, interviews with personnel in the occupation, and research on available student opportunities.

Job Summary

Geophysicists use the principles of physics to learn about the Earth's surface and interior. Their work includes studying the properties of Earth's magnetic, electric, and gravitational fields. They employ field, laboratory, and computational techniques in the investigation, measurement, analysis, evaluation, and interpretation of phenomena related to the structure, composition, physical properties, and dynamics of the Earth's surface and interior.

Build Grow Connect

Undergraduate

- Clubs, student government, or geoscience professional societies
- Hone skills through courses, community involvement, and conference presentations
- Geoscience professional society conference
- Summer of Applied Geophysical Experience
- UNAVCO's Research Experiences in Solid Earth Sciences for Students (RESESS) or UNAVCO Student Internship Program (USIP)
- Incorporated Research Institutions for Seismology (IRIS) internship
- Southern California Earthquake Center (SCEC) internships SURE or USEIT
- National Lab (may require US citizenship or ability to obtain a security clearance)
- For-profit industry internships
- Degree in geosciences, physics, math, engineering, or environmental science
- Courses in earth science, math, physics, and computer science
- Research experience
- Lab, field or instrumentation experience

Graduate/Master's

- Assist with undergraduate field trips, community outreach
- Present research at a conference
- Publish research
- Events, activities, and technical sessions at conferences
- Departmental committee, clubs, geoscience professional societies
- UNAVCO Student Internship Program (USIP)
- For-profit industry internships
- National Lab (may require U.S. citizenship or ability to obtain a security clearance)

Also applicable at Ph.D. level

- Summer of Applied Geophysical Experience
- IRIS Early Career Investigators program
- Independent geophysics research with qualifiable skill development and scientific contribution
- Lab, field, applied research, or instrumentation experience
- Become a teaching assistant
- Courses in geophysics, computer science, and applied math and physics (heavy emphasis on computational skills)
- Master's thesis topic related to geophysics

Ph.D./Post-doc

- Conferences, campus career fairs, campus career/job presentations, communities in and out of geosciences
- Departmental committee, clubs, geoscience professional societies
- Present research at conference
- Publish research, collaborate with colleagues on research projects
- Host session at professional conference, lead undergraduate field trips, community outreach
- ORISE internships, fellowships, and research opportunities
- USGS Mendenhall Program
- Mentor undergraduate student research project
- National Science Foundation Postdoctoral Fellowship
- Become a teaching assistant
- Extensive applied research, computer programming, lab, field, or instrumentation experience
- Advanced courses in geophysics, applied math and physics, and courses with major computing/ computer science components
- Dissertation topic(s) related to geophysics

Symbol Key

Attend
Communicate
Network
Participate
Leadership
Internship
Scholarship
Fellowship
Academics

AGI american geosciences institute
connecting earth, science, and people