

# Why major in GES?

Many people think that the geological sciences involve just the study of rocks, but the field is much more diverse than that. Courses in GES cover a wide range of topics and the faculty who teach those courses have knowledge and expertise in a broad range of subjects.

## **Geological & Environmental Sciences** includes

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- Earth's history and the evolution of life
  - Earth's past climate as recorded in ice, marine sediments, and terrestrial sediments
  - cycling of nutrients like carbon and nitrogen
  - the processes that shape the Earth's landscapes: mountain building, subsidence, erosion
  - the chemistry and physics of earth materials, including rocks, minerals, soils, magma, water, ice, and sediments
  - sources of energy resources, and economic minerals
  - natural hazards like volcanoes, earthquakes, and landslides
  - contamination of groundwater, soil, lakes, reservoirs, and rivers
  - geologic engineering, modeling, and simulation
  - resource depletion and sustainable practices
  - regional geologic histories and plate tectonics
  - the relationships between geology and population
    - how geology affects human health and society
    - planetary geology and astrobiology
  - interactions between microbes and earth materials

*... and that's just the beginning*

### **Field Trips**

Our location near the Pacific coast, the Sierra Nevada, and the San Andreas fault system provides a fantastic setting for field studies, and most GES courses include field trips. You'll go everywhere from the beach to study wave action and erosion to Death Valley and beyond.

### **Research**

Most GES majors take advantage of multiple opportunities to conduct in-depth research with a faculty member. Recent research projects have included everything from Hawaiian coral analysis to mapping in Nevada to analyzing GIS data to isotopic lab work.

### **Career Preparation**

A GES major or minor prepares you for a career in environmental engineering, land use planning, law, public service, teaching, graduate studies in earth sciences, and many other professions that require an understanding of the Earth and a background in science.

**Interested?** Visit us in Building 320, Room 114 or on the web:  
<http://pangea.stanford.edu/GES/undergraduates>