

GEOLOGY AND GEOPHYSICS, B.S.

The complementary fields of geology and geophysics are combined in one interdisciplinary department, with graduate degrees offered in both disciplines. The undergraduate degree is in geology and geophysics.

Geology offers unusual opportunities to interweave knowledge from many disciplines in the study of natural Earth phenomena. Those who enjoy the challenge of integrating different kinds of information into a unified interpretation will find geology particularly satisfying. Most geology students enjoy travel and have a strong interest in the natural environment as it is today and as it has developed through the past 4.5 billion years. A natural capacity for historical and sequential thought, inductive reasoning, and three-dimensional perception is helpful, and these skills will be developed. Geological investigations are becoming increasingly quantitative and experimental, and thus require some computer experience and a strong foundation in chemistry, physics, and mathematics.

The student of geophysics is interested in developing a quantitative understanding of the structure and dynamics of the Earth's interior from the shallow crust to deep core. Courses in geophysics apply basic physical laws and processes, such as those governing gravity, magnetism, heat flow, and seismic wave propagation, to the study of the Earth. An undergraduate may choose to concentrate in geophysics, but professional employment in the field often requires an advanced degree. Most students who pursue advanced study and careers in geophysics major in geology, physics, mathematics, or engineering as undergraduates.