Major in Geophysics

Geophysical techniques are used to understand the physical behavior of planet Earth, including plate-tectonic processes, earthquake mechanisms, and nuclear test-ban verification. The B.S. degree in Geophysics provides a strong quantitative background in seismology, geothermics and digital signal processing.

Requirements for the B.S. Degree. A minimum of 33 hours in Earth Sciences, selected from the following:

1. One course chosen from GEOL 1301, 1305, 1307, 1308, 1313 or 1315 – three hours

2. GEOL 3340 (Face of the Earth), 3451, 3452 (Earth Materials I and II) – 11 hours

3. GEOL 3454 (Structural Geology), 5320 (Dynamic Earth I) and 5392 (Introduction to Seismology) – 10 hours

4. Earth Science electives at the 3000 level or above, one of which must be in Geophysics – nine hours minimum

Required support courses – 30 hours minimum:

1. CHEM 1303 and 1113 – four hours

2. PHYS 1303, 1105; 1304, 1106 – eight hours

3. MATH 1337, 1338, 2339 (Calculus with Analytic Geometry I, II, III); 2343 (Elementary Differential Equations); 3337 (Advanced Mathematics for Science and Engineering I); and 3353 (Introduction to Linear Algebra) – 18 hours

NOTES: Participation in a recognized geology or geophysics summer field camp is strongly recommended for all geophysics majors. Experience with a modern scientific computing language is essential. This experience can be gained in a course such as GEOL 3359 (Computer Methods in Earth Sciences). The requirements for the Geophysics major are considered minimal. Students should consult a faculty adviser for recommendations on additional course work that best fits their goals.