

Transitioning Undergraduates from Students to Geoscientists for Successful Employment

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The geology program at BYU-Idaho has been a 4-year program since 2001. We currently have 178 majors and 6 full-time, tenured faculty, and 2 temporary, full-time faculty. Each year we also teach hundreds of non-science majors in our general education courses. Since 2009 the number of geology majors enrolled in our program has increased from 60 to 178 and the number of graduates has increased from 11 to 32.

Our program includes courses in geology, and 2 semesters each of chemistry, calculus, and calculus-based physics to fulfill major credit requirements. We offer many learning-by-doing experiences for our students, including a quality field camp and mentored student research. In our core geology courses, students complete the transition from 'being in college to take classes,' to 'being in college to prepare for a career.' Field camp, course field trips, and mentored research have been designed to help foster our students' abilities to "do" geology in unscripted situations. Students also take 4 elective courses that allow them to emphasize study areas of their choice from topics including geomorphology, applied geophysics, applied GIS, geochemistry, petroleum geology, groundwater hydrology, environmental geology, oceanography, and geology of North America to broaden their background as a geoscientist. As a capstone course students attend a 6-credit field camp that focuses on geologic mapping and sequence stratigraphy.

We recognize that the most employable degree in geology is the M.S. degree. As such, we strive to help our B.S. students prepare for graduate school and for a career in petroleum, environmental/engineering geology, mining, or hydrology. Students who intend to go to graduate school are encouraged to complete a mentored research project, but are not required to do so. The majority of our students are admitted successfully in many graduate school programs throughout the country. Following the successful completion of graduate school, those students are employed and well-compensated. We also have a few students who opt to seek jobs upon finishing their B.S. rather than attend graduate school. We recommend that these students minor in math, engineering, GIS, or computer science as those who do are more likely to find employment in areas such as the petroleum service industry, petroleum geotechnical positions, GIS, and water resources. Other students we prepare include those who wish to be GIS professionals, continue as Law students specializing in corporate or environmental law, or to complete a Masters of Business administration with a focus on mining or petroleum business. These students have also been successful in finding jobs and graduate schools.

In comparison to a recent analysis of national data provided by the American Geological Institute our department has higher graduation rates than the national average with 65%, 82%, and 94% of our freshman, sophomores, and juniors graduating compared to 16%, 33%, and 60% nationally. Our department also has a higher graduate school placement (62% for our graduates) than the national average (15% nationally) and produces students who succeed in graduate school and employment. For example, from 2002 to 2012 all but two of our students who went to graduate school finished successfully.