

Bachelor of Science in Geology with Engineering Geology Emphasis

The B.S. degree is offered for undergraduates who wish to become professional - geoscientists either after their bachelor's degree or after subsequent graduate study. It trains students in the essential observational and analytical skills of field geology as well as more applied areas of microscope petrology, geochemistry, and geotechnology. The B.S. degree is designed to give the student a broad and comprehensive understanding of the discipline of geology and a firm background in math, physics, and chemistry. Students must fulfill 8 of the 9 University General Education Objectives (a minimum of 36 credits-- see the General Education Requirements (<http://coursecat.isu.edu/undergraduate/academicinformation/generaleducation>) in the Academic Information section of this catalog).

Code	Title	Credits
Required Courses:		
MATH 1170	Calculus I	4
MATH 1175	Calculus II	3-4
or MATH 3350	Statistical Methods	
CHEM 1111 & 1111L	General Chemistry I and General Chemistry I Lab	5
CHEM 1112 & 1112L	General Chemistry II and General Chemistry II Lab	4
PHYS 1111	General Physics I ¹	3-4
or PHYS 2211	Engineering Physics I	
GEOL 1107	Real Monsters ²	3
GEOL 2204	Fluid Earth	4
GEOL 2205	Solid Earth	4
GEOL 3310	Geologic Field Methods	3
GEOL 3313	Earth Materials I	3
GEOL 3314	Earth Materials II	3
GEOL 3315	Evolution of the Earth's Surface	4
GEOL 4403 & 4403L	Principles of Geographic Information Systems and Principles of GIS Laboratory	3
GEOL 4421 & 4421L	Structural Geology and Structural Geology Laboratory	4
GEOL 4450	Field Geology ³	6
GEOL 4452	Sedimentation-Stratigraphy	4

42 required geoscience credits plus upper division geoscience elective courses to equal at least 50 geoscience credits.

¹ May choose the following optional courses: PHYS 1113, PHYS 1114, General Physics Laboratory, 2 cr; PHYS 2213, PHYS 2214, Engineering Physics Laboratory, 2 cr.

² Transfer students may substitute other courses for GEOL 1107 with the permission of the Geosciences Department Chair or Geosciences Undergraduate Advisor.

³ GEOL 4450 is a 5-week summer field course, usually taken between the junior and senior years.

Emphasis in Engineering Geology

Complete the following courses in addition to the Bachelor of Science in Geology:

Code	Title	Credits
CE/GEOL 4454	Basic Engineering Geology	3
CE/GEOL 4455	Geologic Data Methods	3
CE/GEOL 4475	Essentials of Geomechanics	3
CE/GEOL 4476	Engineering Geology Project	1
CE 4480	Earthquake Engineering	3