

Bachelor of Arts in Geology

The B.A. in Geology, General Geology Concentration is recommended for students planning a career in public service and education (e.g. government agencies, park rangers and K-12 science teaching), non-profit or non-governmental environmental organizations, or pre-environmental law. This Concentration has maximum elective flexibility to produce an experience tailored to the needs of the student.

The B.A. in Geology, Field and Applied Geology Concentration is recommended for students planning to become professional geologists employed by environmental and geo-technical firms, governmental agencies, oil and mining companies, and for those students planning to pursue a graduate degree in geology. Emphasizing field and applied geology courses, and experiential learning, this program is designed to permit students to meet existing requirements for Professional Licensing.

Geology majors must earn a grade of "C-" (1.7) or better in all required geology courses for those courses to satisfy the degree requirements for a B.A. degree in Geology. No more than 3 units of elective may be from supervision courses. At least 3 units of elective must be from GEOL courses. Students may not earn credit for both concentrations.

Requirements (69-75 units)

Total units required for graduation: 120

Requirements for the B.A. in Geology

Lower-division requirements (22-25)

Choose one of the following courses, with laboratory	4-5
CHEM 2050 Survey of General Chemistry	
CHEM 2050L Survey of General Chemistry Laboratory	
CHEM 2100 General Chemistry I	
CHEM 2100L General Chemistry I Laboratory	
Choose one from the following (fulfills GE category B4)	3-4
MATH 1401 Accelerated Preparation for Calculus	
MATH 1601 Modeling with Calculus	
MATH 2210 Calculus I	
Choose one of the following courses, with laboratory	4-5
PHYS 1000 Physics in the Modern World & 1000L and Physics in the Modern World Lab	
PHYS 2000 Introduction to Physics I & 2000L and Introduction to Physics I Lab	
PHYS 2500 General Physics I & 2500L and General Physics I Lab	
Choose one of the following courses:	3
GEOL 1000 Introductory Geology	
GEOL 1020 Plate Tectonics: Key to Understanding Earthquakes, Volcanoes and Tsunami	
GEOL 1060 Environmental Geology and Geological Hazards	
Choose one of the following laboratories:	1
GEOL 1000L Introductory Geology Laboratory	

GEOL 1060L Environmental Geology and Geological Hazards Laboratory	
GEOL 2000 Interpreting Earth Systems History: Stories from an Ancient Planet	4
GEOL 2500 Geology of California	3
Upper-division requirements (34)	
GEOL 3100 Introduction to Geologic Mapping	3
GEOL 3200 Mineralogy	5
GEOL 3220 Introduction to Geochemistry	4
GEOL 3240 Igneous and Metamorphic Petrology	4
GEOL 3300 Sedimentary Geology: Principles and Applications	4
GEOL 3600 Structural Geology	4
GEOL 3700 Groundwater Hydrology	3
GEOL 3990 Geological Research Design	3
GEOL 4000 Undergraduate Geological Research	2
GEOL 4900 Senior Seminar	2
Concentration (13-16)	
Students must satisfy the requirements of one of the concentrations listed below.	13-16
Total Units	69-75

Concentrations (13-16 units)

General Geology Concentration (13 units)

(Program Code GEOL)

Requirements (13)

A minimum of 13 units chosen from the following (no more than 3 units from supervision courses):	13
Any 3100-level or above Geology course, not previously used for the degree, including:	
GEOL 3400 Sedimentary Geology: Environmental Systems Analysis	
GEOL 3500 Introductory Paleontology	
GEOL 3600 Structural Geology	
GEOL 3700 Groundwater Hydrology	
GEOL 3750 Field Methods in Hydrology	
GEOL 4100 Engineering Geology	
GEOL 5000 Advanced Topics in Geology	
GEOL 5000L Laboratory for Advanced Topics in Geology	
GEOL 5200 Tectonics	
GEOL 5220 Neotectonics and Seismic Hazard Analysis	
GEOL 5240 Volcanology and Volcanic Hazard Assessment	
GEOL 5260 Advanced Structural Geology	
GEOL 5280 Digital Mapping and GIS for Scientists	
GEOL 5400 Environmental Hydrology	
GEOL 5420 Geochemical Thermodynamics	
GEOL 5430 Isotope Geochemistry	
GEOL 5440 Environmental Geochemistry	
GEOL 5460 Low-temperature Geochemistry	
GEOL 5600 Earth Resources	

GEOL 5620	Site Investigation, Siting, and Case Histories in Engineering Geology	
GEOL 6100	Graduate Geological Mapping	
Total Units		13

Field and Applied Geology Concentration (16 units)

(Program Code: GEFA)

Requirements (16)

GEOL 4100	Engineering Geology	4
Six units chosen from:		6
GEOL 3901	Advanced Field Geology	
GEOL 3902	Advanced Field Geology (2)	
GEOL 3903	Advanced Field Geology (3)	
GEOL 3904	Advanced Field Geology (4)	
GEOL 3906	Advanced Field Geology (6)	
GEOL 5280	Digital Mapping and GIS for Scientists (3)	
A minimum of 6 units chosen from:		6
GEOG 4400	Geomorphology (3)	
GEOL 5600	Earth Resources (4)	
GEOG 2250	Introduction to Geographic Information Systems and Cartography	
GEOL 3750	Field Methods in Hydrology (3)	
GEOL 4200	Topics in Applied Geology (3)	
GEOL 4200L	Laboratory for Topics in Applied Geology (1)	
GEOL 5220	Neotectonics and Seismic Hazard Analysis (4)	
GEOL 5400	Environmental Hydrology (3)	
GEOL 5620	Site Investigation, Siting, and Case Histories in Engineering Geology (4)	
Total Units		16