

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 13-16 listed below.

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
3100-level or above GEOL courses not previously used for the degree	
2000-level and higher courses in MATH, BIOL, CHEM, or PHYS not previously used for the degree, up to 6 units	
GEOG 2250 Introduction to Geographic Information Systems and Cartography	
GEOG 3710 Advanced Geographic Information Systems	
MATH 2265 Statistics with Applications	
GEOG 4250 Watershed Hydrology and Management	
GEOG 4400 Geomorphology	
HSCI 5557 Solid and Hazardous Waste Management	

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 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