

GEOLOGY, MINOR

College of Letters & Science

The minor in Geology offers students a chance to emphasize in one of four areas: General Geology, Engineering Geology, Geochemistry, or Paleobiology.

Students majoring in **Geology** may elect to complete a minor in Geophysics, Environmental Geology, or Oceanography. They may not complete a minor in Geology.

Students majoring in **Marine & Coastal Science** may elect to complete a minor in Geology, Geophysics, or Environmental Geology. They may not complete a minor in Oceanography.

The minor is sponsored by the Department of Earth & Planetary Sciences (<https://catalog.ucdavis.edu/departments-programs-degrees/earth-planetary-sciences/>).

Advising

Visit the staff major advisor (<https://eps.ucdavis.edu/students/undergrad/advising/>) for help navigating minor requirements, policies, prerequisites, and course offerings. Visit the faculty major advisors (<https://eps.ucdavis.edu/students/undergrad/advising/>) for additional advice on courses, careers, and graduate school. Faculty Advisors: Same as Geology Major Faculty Advisors (<https://catalog.ucdavis.edu/departments-programs-degrees/earth-planetary-sciences/geology-bs/>); except Paleobiology emphasis: R. Motani, G. Vermeij.

Work with your major advisor and college advisors to fit a minor into your overall academic plan.

Declare your minor using the OASIS Minor Declaration form (<https://students.ucdavis.edu/forms/instructions/minordeclaration.aspx?sv=true>), due the quarter before graduation.

Code	Title	Units
Choose one of four emphases:		19-24
General Geology Emphasis (p. 1)		
Engineering Geology Emphasis (p. 1)		
Geochemistry Emphasis (p. 1)		
Paleobiology Emphasis (p. 1)		
Total Units		19-24

General Geology Emphasis

Code	Title	Units
GEL 001	The Earth	3-4
or GEL 050	Physical Geology	
GEL 050L	Physical Geology Laboratory	2
GEL 101	Structural Geology	3
GEL 107	Earth History: Paleobiology	3
GEL 108	Earth History: Paleoclimates	3
GEL 109	Earth History: Sediments & Strata	3
GEL/ESP 116N	Oceanography	3
or GEL 134	Environmental Geology & Land Use Planning	
Total Units		20-21

Engineering Geology Emphasis

Code	Title	Units
GEL 050 & 050L	Physical Geology and Physical Geology Laboratory	5
ECL 171 & 171L	Soil Mechanics and Soil Mechanics Laboratory	5
Choose three:		9-14
GEL 134	Environmental Geology & Land Use Planning	
GEL 161	Geophysical Field Methods	
GEL 162	Geophysics of the Solid Earth	
HYD 103N/ EBS 103	Fluid Mechanics Fundamentals	
HYD/EBS 144	Groundwater Hydrology	
HYD 146/GEL 156	Hydrogeology & Contaminant Transport	
SSC 118	Soils in Land Use & the Environment	
SSC 120	Soil Genesis, Morphology, & Classification	
Total Units		19-24

Geochemistry Emphasis

Code	Title	Units
GEL 060	Earth Materials: Introduction	4
GEL 146	Radiogenic Isotope Geochemistry & Cosmochemistry	3
or GEL 148	Stable Isotopes & Geochemical Tracers	
CHE 110A	Physical Chemistry: Introduction to Quantum Mechanics	4
CHE 110B	Physical Chemistry: Properties of Atoms & Molecules ¹	4
Choose two electives:		6-9
CHE 110C	Physical Chemistry: Thermodynamics, Equilibria & Kinetics	
GEL 108	Earth History: Paleoclimates	
GEL 146	Radiogenic Isotope Geochemistry & Cosmochemistry	
GEL 148	Stable Isotopes & Geochemical Tracers	
HYD 134	Aqueous Geochemistry	
SSC 102	Environmental Soil Chemistry	
Total Units		21-24

¹ Chemistry majors may substitute one of the elective courses for Chemistry CHE 110B.

Paleobiology Emphasis

Code	Title	Units
GEL 107	Earth History: Paleobiology	3
GEL 107L	Earth History: Paleobiology Laboratory	2
GEL 108	Earth History: Paleoclimates	3
GEL 141	Evolutionary History of Vertebrates	3
or GEL 144	Historical Ecology	
Choose at least 9 additional units:		9
ANT 151	Primate Evolution	
ANT 152	Human Evolution	

EVE 100	Introduction to Evolution
EVE 101	Introduction to Ecology
EVE 102	Population & Quantitative Genetics
EVE 105	Phylogenetic Analysis of Vertebrate Structure
EVE 112	Biology of Invertebrates
EVE 112L	Biology of Invertebrates Laboratory
EVE 140	Paleobotany
EVE 149	Evolution of Ecological Systems
GEL 109	Earth History: Sediments & Strata
GEL/ESP 150C	Biological Oceanography
Total Units	20