

GEOLOGY, MINOR

The Geology Program

The program of the Department of Geology provides each major with a strong broad-based education in earth & environmental sciences with flexibility for students to pursue their own interests. The major may choose one of two options, either general geology or environmental geology. Independent research experiences are an integral part of both options designed as a capstone experience where students develop transferrable and marketable skills. The Geology curriculum stresses quantitative methods in the laboratory, data-driven approaches to problem-solving, and place-based learning and training. Geology majors have access to field class and research experiences historically ranging from Virginia's coastline to the Blue Ridge, Hawaii, California, Alaska, and the Colorado Plateau in the United States, and Scotland, Norway, and Oman abroad.

Geology majors are prepared for careers in environmental consulting, water resources, oil, gas, & mineral exploration, geotechnical work, natural hazards, climate and sustainability, the renewable energy sector, GIS/data analysis, education, and government or nonprofit science agencies. This training also provides a strong foundation for graduate or professional study in geology, environmental science, engineering, risk management, public policy, law, science communication, or related applied fields.

Required Credit Hours: 21

Code	Title	Hours
Introductory Sequence		
Select one of the following options:		4-5
GEOL 101 & GEOL 160	The Dynamic Earth: Physical Geology and Investigating the Earth: Introductory Geology Laboratory	
GEOL 110 & GEOL 160	Earth's Environmental Systems: Physical Geography and Investigating the Earth: Introductory Geology Laboratory	
GEOL 150 & GEOL 160	First-Year Seminar and Investigating the Earth: Introductory Geology Laboratory	
GEOL 250	Geologic Evolution of VA	
Core Courses		
Select at least one course from Group A:		3-4
GEOL 315	Hydrology	
GEOL 316	Environmental Geochemistry	
GEOL 320	Earth Surface Processes	
GEOL 327	Igneous and Metamorphic Petrology	
Select at least one course from Group B:		3-4
GEOL 322	The Sedimentary Record	
GEOL 324	Paleoclimatology & Paleoceanography	
GEOL 325	Paleontology	
Select at least one course from Group C:		4
GEOL 323	Earth Structure & Dynamics	
GEOL 321	Rock-Forming Minerals	
Elective Courses		
Select six credits from the following: ¹		6
GEOL 203	Age of Dinosaurs	

or GEOL 207 Planetary Geology or GEOL 212 Global Climate Change	
GEOL 424	Sedimentology Seminar
GEOL 425	Structural Geology Seminar
GEOL 426	Paleobiology Seminar
GEOL 428	Geochemistry Seminar
GEOL 429	Hydrology Seminar
GEOL 437	Special Topics Seminar
GEOL 305	Environmental Geology
GEOL 310	Regional Field Geology
GEOL 311	Field Methods in the Earth Sciences
GEOL 314	Watershed Dynamics
MSCI 305	Coastal and Marine Geology
Total Hours	20-23

¹ Additional core courses can be used for elective credits. Only one of the following courses can be used to count towards the minor: GEOL 203 Age of Dinosaurs, GEOL 207 Planetary Geology, and GEOL 212 Global Climate Change.

² (cannot be applied to minor if MSCI 421 applies to minor)