

# GEOLOGY: ENVIRONMENTAL HYDROGEOLOGY OPTION

**Ask About Our  
Available  
Scholarships**

## ENSURING WATER SECURITY

## RECOMMENDED 4-YEAR PLAN

Building off a 100-year tradition of training leaders, our **Geology** degree is among the top-ranked programs for quality and value in the nation. Our planet is facing several compounding threats associated with urbanization, smoke, water pollution, and restoration and there is an urgent need for a well trained workforce that understand how belowground water systems are impacted and that can make informed decisions on wells, pumps, drains, and restoration of waterways following land use. To meet this need, the **Geology Environmental Hydrogeology** option focuses on providing students with knowledge on how groundwater moves through soil and rocks, including aquifers. The degree includes a focus on the chemical and thermal interactions of the water with the geology. Our students work directly with world-class faculty in the laboratory and unique outdoor settings throughout their college careers. The majority of our undergraduates participate in undergraduate research experiences and many join faculty on travel to exciting destinations like Iceland and Hawaii. Our geology courses emphasize a “hands-on” approach, bridging learning opportunities in the classroom with direct experience in the field.

FRESHMAN		FALL
COURSE		CREDITS
GEOL 101/101L OR GEOL 111/111L (CHEM 050, 101, MATH 143, 160, or 170; or sufficient test score)	<i>Science</i>	4
ENGL 101* - Intro to College Writing (sufficient test score)	<i>Writ Comm</i>	3
MATH 143 - College Algebra and Math 144 - Analytic Trigonometry		4
General Education Requirements		6
		<b>TOTAL 17</b>

FRESHMAN		SPRING
COURSE		CREDITS
ENGL 102* - College Writing & Rhetoric (ENGL 101)	<i>Writ Comm</i>	3
CHEM 111/111L - General Chemistry		4
GEOL 102/102L - Historical Geology and Lab		4
MATH 170 - Calculus		4
		<b>TOTAL 15</b>

SOPHOMORE		FALL
COURSE		CREDITS
GEOL 309 - Ground Water Hydrology		3
MATH 175 - Calculus II or MATH 330 - Linear Algebra or STAT 251 Statistical Methods		3-4
PHYS 111/111L OR PHYS 211/211L		4
General Education Requirement		3
		<b>TOTAL 13</b>

SOPHOMORE		SPRING/ SUMMER
COURSE		CREDITS
GEOL 249 - Mineralogy and Optical Mineralogy		4
GEOL 345 - Structural Geology		4
PHYS 112/112L OR PHYS 211/211L		4
STAT 251 - Statistical Methods		3
Summer: Field Geology Methods		3
		<b>TOTAL 18</b>

*This academic plan is intended as a guideline only and does not replace academic advising. 120 credits minimum are required for a B.S. in Geology. Minimum of 36 upper-division credits required to graduate. See course catalog and department website for complete degree requirements and additional information.*

# B.S. GEOLOGY ENVIRONMENTAL HYDROGEOLOGY OPTION

## RECOMMENDED 4-YEAR PLAN

JUNIOR		FALL
COURSE		CREDITS
GEOL 324 - Principles of Stratigraphy and Sedimentation		4
GEOL 326 - Igneous and Metamorphic Petrology		4
GEOL 361 - Geology and the Environment		3
ENGL 318 - Science Writing		3
		<b>TOTAL 14</b>

JUNIOR		SPRING/ SUMMER
COURSE		CREDITS
GEOL 474 - Stable Isotopes and the Environment OR GEOL 435 - Glaciology and the Dynamic Frozen Earth		3
Elective		3
HYDR 412 - Environmental Hydrogeology		3
General Education Requirements		6
Summer: GEOL 490 - Geology Field Camp or GEOL 489 Virtual Field Camp		3
		<b>TOTAL 18</b>

SENIOR		FALL
COURSE		CREDITS
GEOL 410 - Groundwater Field Methods		3
HYDR 409 - Quantitative Hydrogeology		3
GEOG 385 - Foundations of GIS		3
General Education Requirements		3
Elective		3
		<b>TOTAL 15</b>

SENIOR		SPRING
COURSE		CREDITS
GEOL 422 - Principles of Geophysics		4
GEOL 428 - Geostatistics		3
GEOL 431 - Chemical Hydrogeology		3
GEOG 350 - Sustainability of Global Development		3
		<b>TOTAL 13</b>



**READY TO GET STARTED?**



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