

Geoscience Major

Area of Emphasis

Students must complete requirements in one of the following areas of emphasis:

- Geoscience Emphasis
 - Geoscience Emphasis (Accelerated) - Integrated with graduate Environmental Science & Policy program
- Geoscience Emphasis for Students Seeking Teaching Certification

General Emphasis

Code	Title	Credits
Supporting Courses		34
CHEM 211 & CHEM 213	Principles of Chemistry I and Principles of Chemistry I Laboratory	
CHEM 212 & CHEM 214	Principles of Chemistry II and Principles of Chemistry II Laboratory	
GEOSCI 202	Physical Geology	
GEOSCI 203	Earth System History	
GEOSCI 204	Earth System History Laboratory	
MATH 202	Calculus and Analytic Geometry I	
MATH 260	Introductory Statistics	
PHYSICS 201	Principles of Physics I	
COMM 133 or WF 105 or ENV SCI 339	Fundamentals of Public Address Research and Rhetoric Scientific Writing	
Upper-Level Courses		26
ENV SCI 320	The Soil Environment	
ENV SCI 330	Hydrology	
GEOSCI 340	Introduction to Mineralogy & Petrology	
GEOSCI 432	Hydrogeology	
Choose 12 credits from the following courses:		
ENV SCI 337	Environmental GIS	
ENV SCI 425	Global Climate Change	
GEOSCI 301	Introduction to Geoscience Field Methods	
GEOSCI 350	Structural Geology and Geodynamics	
GEOSCI 402	Sedimentology & Stratigraphy	
GEOSCI 421	Geoscience Field Trip (Offerings of trip to different areas may be repeated for credit)	
GEOSCI 450	Ore Deposits	
GEOSCI 470	Glacial Geology & Landscapes	
GEOSCI 492	Special Topics in Geoscience ¹	
GEOSCI 498	Independent Study	
GEOSCI 499	Travel Course	
WATER 321	Stable Isotopes in the Environment	
WATER 444	Geochemistry of Natural Waters	
Total Credits		60

¹ Course topics vary. Offerings of different topics can be repeated for credit.

Accelerated Emphasis - Integrated with graduate Environmental Science & Policy program

Code	Title	Credits
Supporting Courses		34
CHEM 211 & CHEM 213	Principles of Chemistry I and Principles of Chemistry I Laboratory	
CHEM 212 & CHEM 214	Principles of Chemistry II and Principles of Chemistry II Laboratory	
GEOSCI 202	Physical Geology	
GEOSCI 203	Earth System History	
GEOSCI 204	Earth System History Laboratory	
MATH 202	Calculus and Analytic Geometry I	
MATH 260	Introductory Statistics	
PHYSICS 201	Principles of Physics I	
COMM 133 or WF 105	Fundamentals of Public Address Research and Rhetoric	
ENV SCI 339	Scientific Writing	
Upper-Level Courses		26
ENV SCI 320 or ENV SCI 520	The Soil Environment The Soil Environment	
ENV SCI 330	Hydrology	
GEOSCI 340	Introduction to Mineralogy & Petrology	
GEOSCI 432/632	Hydrogeology	
Choose 12 credits from the following courses:		
ENV SCI 337	Environmental GIS	
ENV SCI 425 or ENV SCI 625	Global Climate Change Global Climate Change	
GEOSCI 301	Introduction to Geoscience Field Methods	
GEOSCI 350	Structural Geology and Geodynamics	
GEOSCI 402	Sedimentology & Stratigraphy	
GEOSCI 421 or GEOSCI 621	Geoscience Field Trip (Offerings of trip to different areas may be repeated for credit) Geoscience Field Trip	
GEOSCI 450	Ore Deposits	
GEOSCI 470 or GEOSCI 670	Glacial Geology & Landscapes Glacial Geology & Landscapes	
GEOSCI 492	Special Topics in Geoscience ¹	
GEOSCI 498	Independent Study	
GEOSCI 499	Travel Course	
WATER 321	Stable Isotopes in the Environment	
WATER 444 or WATER 644	Geochemistry of Natural Waters Geochemistry of Natural Waters	
Total Credits		60

Emphasis for Students Seeking Teaching Certification

This emphasis also requires:

- Admission to the Education Program
- Completion of the Education minor

Code	Title	Credits
Supporting Courses ¹		26-27
CHEM 211 & CHEM 213	Principles of Chemistry I and Principles of Chemistry I Laboratory	

GEOSCI 202	Physical Geology
GEOSCI 203	Earth System History
GEOSCI 204	Earth System History Laboratory
GEOSCI 222	Ocean of Air: Weather and Climate
PHYSICS 141	Astronomy
COMM 133	Fundamentals of Public Address
or WF 105	Research and Rhetoric
or ENV SCI 339	Scientific Writing
Choose two of the following courses:	
MATH 104	Precalculus
MATH 202	Calculus and Analytic Geometry I
MATH 260	Introductory Statistics
Upper-Level Courses	26
ENV SCI 320	The Soil Environment
ENV SCI 330	Hydrology
or GEOSCI 432	Hydrogeology
GEOSCI 340	Introduction to Mineralogy & Petrology
Choose 12 credits from the following courses:	
ENV SCI 337	Environmental GIS
ENV SCI 425	Global Climate Change
GEOSCI 301	Introduction to Geoscience Field Methods
GEOSCI 325	Regional Climatology
GEOSCI 350	Structural Geology and Geodynamics
GEOSCI 402	Sedimentology & Stratigraphy
GEOSCI 421	Geoscience Field Trip ²
GEOSCI 450	Ore Deposits
GEOSCI 470	Glacial Geology & Landscapes
GEOSCI 492	Special Topics in Geoscience ²
GEOSCI 498	Independent Study
GEOSCI 499	Travel Course
WATER 321	Stable Isotopes in the Environment
WATER 444	Geochemistry of Natural Waters

Total Credits**52-53**

¹ Candidates for teacher certification are strongly urged to also take CHEM 212 and CHEM 214.

² Course topics vary. Offerings of different topics can be repeated for credit.