

# SCHOOL OF ARTS AND SCIENCES

## GEOLOGY

### Faculty

- David Goldsmith
- Tiffany Rivera (Co-Chair)
- Nick Pollock (Co-Chair)

[View Geology Courses](#)

### Program Goals

- **Critical Thinking**
  - Ability to synthesize multiple lines of evidence and multiple sources of data to support geologic hypotheses
  - Ability to use an Earth Systems perspective to integrate understanding of geologic processes across disciplines
- **Creativity**
  - Ability to evaluate data necessary to answer a particular question
  - Ability to think and extrapolate across a broad range of temporal and dimensional scales
- **Collaboration**
  - Ability to work collaboratively to break a complex problem into simpler, individually achievable tasks
  - Ability to work together constructively in challenging field environments
- **Communication**
  - Ability to explain geologic information at a level appropriate to the audience
  - Ability to read and understand the geologic literature and to create original research reports
  - Ability to communicate scientific information through verbal and written presentation of data, graphics, and maps.
- **Global Responsibility**
  - Ability to assess the effects of human activity on the natural environment
  - Ability to bring a geologic perspective to discussions of social issues

### Objectives

The Geology program offers a Bachelor of Science degree for students interested in understanding the earth. The degree incorporates a diversity of both perspectives and methods. Classes incorporate lecture, lab, and fieldwork to study our planet's physical, chemical, and biological history.

### Program Requirements

Students must maintain a minimum 2.3 GPA in all courses required for the major.

Students must meet the college-wide graduation requirements in addition to the Geology major:

- 124 total hours
- 30 upper division hours
- WCore or Honors College requirements

For course prerequisites, please refer to the course descriptions.

### Geology Major

Requirement Description	Credit Hours	Prerequisites
I. World Language Requirement	8	
The student must complete eight credit hours in a single world language.		
II. Lower Division Geology Courses	18	
GEOL 201 Earth Materials I: Mineralogy	4	GEOL 107 or 111 Co-requisite: GEOL 201L
GEOL 210 Historical Geology	4	GEOL 107 or GEOL 111
GEOL 214 Sedimentology & Stratigraphy	4	GEOL 107 or 111 Co-requisite: GEOL 214L
GEOL 260 Geoliteracy	2	GEOL 107 or 111
Choose one of the following courses:		
GEOL 107 Geology of the American West	4	
GEOL 111 National Parks Geology		

Requirement Description	Credit Hours	Prerequisites
III. Upper Division Geology Courses	18	
GEOL 301 Earth Materials II: Petrology	4	GEOL 201, CHEM 111 Co-requisite: GEOL 301L
GEOL 310 Structural Geology and Tectonics	4	GEOL 107 or 111 Pre or co-requisite: GEOL 425 and PHYS 152 or PHYS 212
GEOL 315 Principles of Paleontology	4	
GEOL 360 Field Geology	6	GEOL 214, GEOL 301, GEOL 310, and GEOL 107 or 111
IV. Electives	8	
Students must take an additional eight credits in geology, including at least one course at the 400 level.		
V. Required Courses from Other Programs	24	
CHEM 111 Principles of Chemistry I	4	Pre or co-requisite: MATH 144 or MATH 143
CHEM 112 Principles of Chemistry II	4	CHEM 111
MATH 201 Calculus I	4	MATH 144
MATH 202 Calculus II	4	MATH 201
PHYS 151 or PHYS 211 Principles of Physics I or Physics for Scientists and Engineers I	4	MATH 144
PHYS 152 or PHYS 212 Principles of Physics II or Physics for Scientists and Engineers II	4	PHYS 151 or PHYS 211
Total Hours for the Geology Major	76	

### Recommended Plan of Study for Geology

	Fall Semester	Spring Semester
Year 1	Geology Learning Community CHEM 111 MATH 201	CHEM 112 MATH 202 GEOL 210 GEOL 260
Year 2	GEOL 201 PHYS 151	GEOL 301 GEOL 214 PHYS 152
Year 3	GEOL 315 DATA 220 (recommended for students considering graduate school)	GEOL 310 GEOL 360 (summer) GEOL Electives
Year 4	GEOL Electives	GEOL Electives

### Geology Minor

Requirement Description	Credit Hours	Prerequisites
I. Required Geology Courses	14	
GEOL 201 Earth Materials I: Mineralogy	4	GEOL 107 or 111 Co-requisite: GEOL 201L
GEOL 210 Historical Geology	4	GEOL 107 or GEOL 111

Requirement Description	Credit Hours	Prerequisites
GEOL 260 Geoliteracy Choose one of the following courses: GEOL 107 Geology of the American West GEOL 111 National Parks Geology	2  4 4	GEOL 107 or 111
II. Electives	10	
Students wishing to complete a minor must take an additional ten credits in Geology, at least four of which are at the 300 level.		
Total Hours for the Geology Minor	24	