COLLEGE OF ARTS AND SCIENCES

GEOLOGY

Faculty

- Nick Pollock (Chair)

Program Goals

- 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
- Ability to evaluate data necessary to answer a particular question
- Ability to think and extrapolate across a broad range of temporal and dimensional scales
- Ability to work collaboratively to break a complex problem into simpler, individually achievable tasks
- Ability to work together constructively in challenging field environments
- 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.
- 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 university-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	**16**	
GEOL 201 Earth Materials I: Mineralogy	4	GEOL 107 or 111 or CHEM 111Co-requisite: GEOL 201L
GEOL 210 Historical Geology	4	
GEOL 214 Sedimentology & Stratigraphy	4	GEOL 107 or 111 or PHYS 151 or 211Co-requisite: GEOL 214L
Choose one of the following courses:		
GEOL 107 Geology of the American West	4	
GEOL 111 National Parks Geology	4	
III. Upper Division Geology Courses	**16**	
GEOL 301 Earth Materials II: Petrology	4	GEOL 201 and CHEM 111Co-requisite: GEOL 301L

Requirement Description	Credit Hours	Prerequisites
GEOL 310 Structural Geology and Tectonics	4	GEOL 107 or 111 and PHYS 152 or 212Co-requisite: GEOL 310L
GEOL 311 Scientific Writing	2	GEOL 107 or 111
GEOL 360 Field Geology (summer even years)	6	GEOL 214, 301, 310
IV. Electives	**12**	
Students must take an additional **twelve** 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	Recommended MATH 144
CHEM 112 Principles of Chemistry II	4	CHEM 111
MATH 201 Calculus I	4	MATH 144 or placement test
MATH 202 or DATA 220 Calculus II or Introduction to Statistics	4	MATH 201 (for MATH only)
PHYS 151 or PHYS 211 Principles of Physics I or Physics for Scientists and Engineers I	4	MATH 144 or placement test; MATH 201 as pre- or co-requisite for PHYS 211 only
PHYS 152 or PHYS 212 Principles of Physics II or Physics for Scientists and Engineers II	4	PHYS 151 or PHYS 211 MATH 202 as pre- or co-requisite for PHYS 212 only
Total Hours for the Geology Major	**76**	

Recommended Plan of Study for Geology

	Fall Semester	Spring Semester
Year 1	GEOL 107 or GEOL 111 MATH 201 WCore Elective	GEOL 214 MATH 202 or DATA 220 WCore Elective
Year 2	GEOL 201 GEOL 210 CHEM 111 Language	GEOL 301 CHEM 112 Language WCore
Year 3	GEOL 311 PHYS 151 or PHYS 211 WCore Elective	GEOL 310 PHYS 152 or PHYS 212 Elective Elective
Year 4	GEOL 4XX WCore Elective Elective	WCore Elective Elective Elective

Geology Minor

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

Requirement Description	Credit Hours	Prerequisites
GEOL 210 Historical Geology	4	
GEOL 311 Scientific Writing	2	GEOL 107 or 111
Choose one of the following courses:		
GEOL 107 Geology of the American West	4	
GEOL 111 National Parks Geology	4	
II. Electives	**12**	
Students wishing to complete a minor must take an additional twelve credits in Geology, at least eight of which are at the 300 level. ENVI 305 is also an acceptable elective.		
Total Hours for the Geology Minor	**26**	