

GEOLOGICAL SCIENCES, BS

Degree: Bachelor of Science (BS)

Major: Geological Sciences

Program Overview

Students in earth, environmental, and planetary sciences obtain a solid background in basic science and mathematics as well as intensive training in the major. In addition, because of the wide variety of ways in which geologic knowledge can be applied, all students are encouraged to take electives in subjects appropriate to their personal objectives, which may range from the engineering applications of geology to the socioeconomic and legal systems bearing on environmental issues. The undergraduate programs stress practical experience and fieldwork as well as classroom study.

All students participate in a three-semester Senior Project sequence in which they propose a research project, conduct the research, write a thesis, and present it to the department.

Learning Outcomes

- Students will be able to demonstrate an understanding of the key concepts and approaches in geology sufficient to apply this understanding to the interpretation of a wide range of earth processes (and their linkages) on different temporal and spatial scales.
- Students will be able to critically evaluate scientific arguments in geology.
- Students will be able to demonstrate competence in standard methods for collecting and evaluating geologic data.
- Students will be able to apply quantitative and qualitative tools in the analysis and interpretation of geologic data.
- Students will be able to execute a geologic research project, including the use of primary literature, collection and interpretation of evidence, and reporting of results.
- Students will be able to demonstrate breadth of technical understanding applicable to the geological sciences.

Undergraduate Policies

For undergraduate policies and procedures, please review the Undergraduate Academics section of the General Bulletin.

Accelerated Master's Programs

Undergraduate students may participate in accelerated programs toward graduate or professional degrees. For more information and details of the policies and procedures related to accelerated studies, please visit the Undergraduate Academics section of the General Bulletin.

Program Requirements

Students seeking to complete this major and degree program must meet the general requirements for bachelor's degrees and the Unified General Education Requirements. Students completing this program as a secondary major while completing another undergraduate degree program do not need to satisfy the school-specific requirements associated with this major.

Code	Title	Credit Hours
Required Courses:		
<i>Choose one of the following:</i>		3
EEPS 110	Physical Geology	
EEPS 101	The Earth and Planets	
EEPS 115	Introduction to Oceanography	
EEPS 119	Geology Laboratory	1
EEPS 210	Earth History: Time, Tectonics, Climate, and Life	3
EEPS 301	Stratigraphy and Sedimentation	3
EEPS 315	Structural Geology and Geodynamics	3
EEPS 317	Introduction to Field Methods	3
EEPS 341	Mineralogy	4
EEPS 344	Igneous and Metamorphic Petrology	4
EEPS 360	Summer Field Camp	6
EEPS 390	Introduction to Geological Research	3
EEPS 391	Senior Project	2
EEPS 392	Professional Presentation	2
Electives ^a		21
Additional Required Courses:		
CHEM 105	Principles of Chemistry I	3
CHEM 106	Principles of Chemistry II	3
CHEM 113	Principles of Chemistry Laboratory	2
ENGR 131	Elementary Computer Programming	3
MATH 121	Calculus for Science and Engineering I	4
MATH 122	Calculus for Science and Engineering II	4
PHYS 121	General Physics I - Mechanics	4
PHYS 122	General Physics II - Electricity and Magnetism	4
<i>Choose one of the following:</i>		3-4
ENGR 225		
ENGR 225B		
CHEM 301	Introductory Physical Chemistry I	
CHEM 335	Physical Chemistry I	
PHYS 221	Introduction to Modern Physics	
Two upper-level MATH or STAT courses		
Two additional math/science/engineering courses		

^a At least two of these electives must be at the 200-level or higher.