Earth Science B.A.

Earth Science Major

The B.A. Earth Science major requires a minimum of 120 total hours to graduate. This total includes UNIFI/General Education requirements and the following specified major requirements, plus electives to complete the minimum of 120 hours.

Required		
Earth Science:		
EARTHSCI 1100	Astronomy	3
EARTHSCI 1110	Astronomy Laboratory	1
EARTHSCI 1200	Elements of Weather	3
EARTHSCI 1300	Introduction to Geology	4
EARTHSCI 1320	Earth History	4
Experiential Learning Requirement (2 hours from the following):		2
EARTHSCI 3410/5410	Field Studies in _____	
EARTHSCI 3430	Internship	
EARTHSCI 4400	Undergraduate Research in Earth and Environmental Science	
Or an experience approved by the department		
Mathematics:		4
MATH 1140	Precalculus	
or MATH 1420	Calculus I	
Electives in Earth Science (3000/4000 EARTHSCI courses must include at least one course from each of astronomy, geology, and meteorology)		16
Cognates - choose one of the following two options:		**5 or 8**
Option 1 Chemistry (5 hours)		
CHEM 1130	General Chemistry I-II	
OR		
Option 2 Chemistry/Physics (8 hours)		
CHEM 1110	General Chemistry I	
and one of the following:		
CHEM 1120	General Chemistry II	
PHYSICS 1511	General Physics I	
PHYSICS 1701	Physics I for Science and Engineering	
Option 1 total hours 42		
Option 2 total hours 45		
Total Hours		**42-45**

Four-Year Plan

Earth Science, B.A.

This is a sample plan of study with a suggested sequencing of classes for the major. University electives may be applied to earn additional academic majors, minors, or certificates. Students should regularly meet with their academic advisor to plan their specific semester schedule to include UNIFI/General Education program and/or university elective hours required.

Course	Title	Hour
Freshman		
Fall		
CHEM 1110	General Chemistry I	4
UNIV 1000	First-Year Cornerstone: Integrated Communication I	3
EARTHSCI 1300	Introduction to Geology	4
UNIFI/General Education or University Electives		3
	Hours	**14**
Spring		
EARTHSCI 1320	Earth History	4
UNIV 1010	First-Year Cornerstone: Integrated Communication II	3
EARTHSCI 1200	Elements of Weather	3
CHEM 1120	General Chemistry II(OR PHYSICS 1501 or PHYSICS 1701)	4
	Hours	**14**
Sophomore		
Fall		
EARTHSCI 1100	Astronomy	3
EARTHSCI 1110	Astronomy Laboratory	1
MATH 1140 Precalculus (or MATH 1420)		4
UNIFI/General Education or University Electives		6
	Hours	**14**
Spring		
Geology, Astronomy and/or Meteorology Electives		4
UNIFI/General Education or University Electives		12
	Hours	**16**
Junior		
Fall		
Geology, Astronomy and/or Meteorology Electives		4
UNIFI/General Education or University Electives		12
	Hours	**16**
Spring		
Geology, Astronomy, and/or Meteorology Electives		4
UNIFI/General Education or University Electives		12
	Hours	**16**
Senior		
Fall		
EARTHSCI 3179 or EARTHSCI 3410 or EARTHSCI 3430 or EARTHSCI 4400		2
Geology, Astronomy, and/or Meteorology Electives		2
UNIFI/General Education or University Electives		11
	Hours	**15**
Spring		
Geology, Astronomy, and/or Meteorology Electives		2
UNIFI/General Education or University Electives		13
	Hours	**15**
	Total Hours	**120**

Learning Outcomes

Earth Science, B.A.

Goal 1 - Critical Thinking & Data Analysis: Our students will use concepts from Earth and Space Science to critically analyze and interpret scientific data.

- **Outcome 1.1** - Analyze and interpret scientific data to formulate an evidence-based conclusion
- **Outcome 1.2** - Use a variety of mathematical tools and computer software to describe scientific phenomena and answer scientific questions

Goal 2 - Communication: Our students will be able to communicate concepts from Earth and Space Science.

- **Outcome 2.1** - Create a well-written report or paper that summarizes scientific data and draws evidence-based conclusions
- **Outcome 2.2** - Create and deliver a well-constructed oral report that summarizes scientific data and draws evidence-based conclusions

Goal 3 - Content Knowledge and Skills: Our students will apply concepts and theories from Earth and Space Science to the real world.

- **Outcome 3.1** - Describe fundamental theories and concepts in Earth and Space Science
- **Outcome 3.2** - Use concepts and theories from Earth and Space Science to create a model of a complex system
- **Outcome 3.3** - Use concepts and theories from Earth and Space Science to solve a real-world problem
- **Outcome 3.4** - Use scientific equipment to collect valid scientific data.

Related Programs

- Environmental Science B.A.
- Geology Minor