

# EARTH SCIENCES (BA OR BS)

Majors in Earth Sciences focus on the materials, processes, and histories of Earth as a planetary system, with a special emphasis on environmental change at geologic time scales. Interest areas include global change, climate adaptation, water resources, planetary science, tectonics, paleontology and evolution, natural hazards, mineral and energy resources, surface processes, geophysics, and paleoclimatology.

Students may obtain a Bachelor of Science degree or a Bachelor of Arts degree. The Bachelor of Science degree has three tracks.

## Requirements

### Bachelor of Science

At least 30 credits of Earth Sciences courses at the 2000 level and above and at least 12 credits of related courses at the 2000 level and above must be successfully completed for the Bachelor of Science in Earth Sciences in addition to the college B.S. requirements. Courses cross-listed with Earth Sciences courses cannot be used to fulfill the related courses requirement.

All students must complete a 2000 level or above EARTH W course, and a concentration listed below. No more than three credits in the major can be from:

Course	Title	Credits
ERTH 4989	Undergraduate Research in Geoscience	3
ERTH 4990	Internship in Geoscience Field Study	1-3
ERTH 4991	Internship in Geoscience Research Paper	1
ERTH 4999	Independent Study	1-6

### Earth Track

Course	Title	Credits
ERTH 3010	Earth History and Global Change	3
ERTH 3030	Earth Structure	3
ERTH 3040	Earth Materials	3
At least 18 additional credits of Earth Sciences courses at the 3000 level and above		18
<b>Total Credits</b>		<b>27</b>

### Environment Track

Course	Title	Credits
ERTH 3020	Earth Surface Processes	3
ERTH 3030	Earth Structure	3
ERTH 3040	Earth Materials	3
Select three courses of the following:		9
ERTH 3710	Engineering and Environmental Geology	
ERTH 4130	Geomicrobiology	
ERTH 4150	Applied Data Analysis in Earth Science	
ERTH 4210	Glacial Processes and Materials	
ERTH 4230	GIS and Remote Sensing for Geoscience Applications	
ERTH 4240	Watersheds and Environmental Change	
ERTH 4430	Stable Isotope Biogeochemistry	
ERTH 4440	Dates and Rates in Earth and Environmental Science	
ERTH 4710	Environmental Site Assessment	

ERTH 4720	Environmental Geochemistry	
ERTH 4735	Introduction to Ground Water Hydrology	
At least nine additional credits of Earth Sciences courses at the 3000 level and above		9
<b>Total Credits</b>		<b>27</b>

### Atmosphere Track

Course	Title	Credits
ERTH 3010	Earth History and Global Change	3
Select one of the following:		3
ERTH 3020	Earth Surface Processes	
ERTH 3030	Earth Structure	
ERTH 3040	Earth Materials	
Select three courses of the following:		9
ERTH 2800	Our Evolving Atmosphere	
ERTH 4150	Applied Data Analysis in Earth Science	
ERTH 4230	GIS and Remote Sensing for Geoscience Applications	
ERTH 4430	Stable Isotope Biogeochemistry	
ERTH 4810	Modeling the Changing Atmosphere and Ocean	
ERTH 4850	Paleoclimatology	
At least 12 additional credits of Earth Sciences courses at the 3000 level and above		12
<b>Total Credits</b>		<b>27</b>

### Bachelor of Arts

At least 24 credits of Earth Sciences courses at the 2000 level and above and at least 12 credits of related courses at the 2000 level and above must be successfully completed for the Bachelor of Arts in Earth Sciences in addition to the college B.A. requirements. Courses cross-listed with Earth Sciences courses cannot be used to fulfill the related courses requirement.

The requirements include the following:

Course	Title	Credits
One 2000 level or above EARTH W course		3
Select two of the following:		6
ERTH 3010	Earth History and Global Change	
ERTH 3020	Earth Surface Processes	
ERTH 3030	Earth Structure	
ERTH 3040	Earth Materials	
At least 15 additional credits of Earth Sciences courses at the 2000 level and above		15
<b>Total Credits</b>		<b>24</b>

No more than three credits can be from EARTH 4989 Undergraduate Research in Geoscience, EARTH 4990 Internship in Geoscience Field Study, EARTH 4991 Internship in Geoscience Research Paper, EARTH 4999 Independent Study. No more than six credits at the 2000 level can count toward the 24 credit total.

Earth Sciences majors satisfy the writing in the major and information literacy competency requirements by passing a 2000 level or above EARTH W course.

A minor in Earth Sciences is described in the “Minors” section.

## **University General Education Requirements**

Every student must meet a set of core requirements to earn a baccalaureate degree, in addition to those required by the student’s major course of study and other requirements set by the student’s school or college. For more information about these requirements, please see General Education Requirements (<https://catalog.uconn.edu/undergraduate/gen-ed-requirements/>).

## **College of Liberal Arts and Sciences Degree Requirements**

Students must meet a set of requirements established by the college in addition to the University’s General Education requirements. For more information, see the College of Liberal Arts and Sciences (<https://catalog.uconn.edu/undergraduate/liberal-arts-sciences/#requirementstext>) section of this catalog.

## **Environmental Earth Sciences (4+1 MS)**

The 4+1 M.S. in Environmental Earth Sciences prepares students for a career as an Environmental Professional/Professional Geoscientist. Courses cover the fundamentals of how the earth works from physical, chemical and biologic perspectives and provide program participants with a unique set of skills to address the environmental, water, and climate challenges of the 21st century. Students complete 30 credits. Up to 12 credits of the required graduate coursework at the 5000 level or higher may be used toward both the undergraduate and M.S. plans of study and students are expected to take between nine and 12 credits of required courses while they are undergraduates. However, courses taken at the 3000-4000 level that are counted on a graduate plan of study cannot also be counted toward an undergraduate degree. Only six credits of 3000 or 4000 level coursework may count toward the M.S.