

EARTH AND ENVIRONMENTAL SCIENCE—GEOSCIENCE-EARTH SCIENCE, B.A.

This major offers a broad perspective on the different sub-disciplines that comprise the Earth Sciences (Physical Geology, Oceanography, Meteorology, Astronomy and Environmental Science). This track is ideal for K-12 teachers who are enrolled in the dual co-major with Early Childhood, Elementary or Secondary Education or for students with a general interest in Earth Sciences without an education major.

Code	Title	Credits
Required		
EESC 238	Wonders of Weather: The Atmosphere	3
EESC 223	The Blue Planet: The Oceans	3
EESC 135	Our Planet Earth	3
EESC 201	Environmental Science for All: Introduction to Environmental Systems and Processes	3
EESC 227	Hands on Earth: Earth Lab	3
EESC 250	Plunder: The Race for Natural Resources	3
EESC 334	Stratigraphy	4
BIOL 130	Principles Biology I	4
CHEM 100	Preparation for General Chemistry	3
MATH 175	Enhanced Precalculus	4
or MATH 140	Statistics I	
PHYS 101	Basic Concepts of Physics	3
PHYS 113	Introduction to Astronomy	3
Earth Science BA electives: Select a minimum of 15 credits from:		
EESC 237	Environmental Issues and Policy: Global and Urban Perspectives	3
EESC 226	Earth 360: Integrated Geography	3
EESC 231	Water Chronicles	3
EESC 235	Global Climate Change	3
EESC 252	GIS I: Contemporary Applications of GIS	3
EESC 336	Field Methods in Geoscience	4
EESC 340	Hydrology I	3
EESC 348	Environmental Geology	3
EESC 350	GIS Applications of Geoscience/Geography	3
EESC 410	Urban Soil Survey	4
EESC 434	Earth Surface Processes	4
EESC 446	Introduction to Geochemistry	3
EESC 447	Introduction to Geophysics	4
EESC 455	GIS III: Modeling with GIS	3
Freshman		
Semester 1		
ENGL 101	English Composition I	4-6
or ESL 101	or English Composition I for English as a Second Language Students	
MATH 175	Enhanced Precalculus	4
or MATH 140	or Statistics I	
INTD 101	Orientation to College ^{*First time Freshmen Only}	1

EESC 135	Our Planet Earth	3
General Education Tier I Course		3
Credits		15-17

Semester 2

ENGL 102	English Composition II	4-6
or ESL 102	or	
EESC 201	Environmental Science for All: Introduction to Environmental Systems and Processes	3
EESC 235	Global Climate Change (General Education Tier II Course) ²	3
BIOL 130	Principles Biology I	4
Credits		14-16

Sophomore

Semester 1

EESC 238	Wonders of Weather: The Atmosphere	3
EESC 227	Hands on Earth: Earth Lab	3
EESC 223	The Blue Planet: The Oceans	3
PHYS 101	Basic Concepts of Physics (General Education Tier I Course)	3
General Education Tier I Course		3
Credits		15

Semester 2

EESC 250	Plunder: The Race for Natural Resources	3
EESC 334	Stratigraphy	4
EESC Elective 2XX - 5XX		3-4
CHEM 100	Preparation for General Chemistry	3
General Education Tier I Course		3
Credits		16-17

Junior

Semester 1

EESC Elective 2XX-4XX		3-4
EESC Elective 2XX-4XX		3-4
PHYS 113	Introduction to Astronomy	3
General Education Tier II Course		3
Credits		12-14

Semester 2

EESC Elective 2XX - 5XX		3-4
General Education Tier II Course		3
General Education Tier II Course		3
Minor or Elective Course		3
Minor or Elective Course		3
Credits		15-16

Senior

Semester 1

EESC Elective 2XX - 5XX		3-4
Minor or Elective Course		3
Minor or Elective Course		3
Minor or Elective Course		3
Minor or Elective Course		3
Credits		15-16

Semester 2

General Education Tier III Course		3
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Minor or Elective Course	3
Minor or Elective Course	3
Minor or Elective Course	3
Minor or Elective Course	3
Credits	15
Total Credits	117-126

¹ The department offers some upper level courses on an even/odd year schedule; therefore there may be variation in this degree map. Please see departmental course sequence.

² This recommended course also satisfies a General Education Tier II course requirement for graduation.

Student Learning Outcomes

Upon completion of the Earth/Environmental Science-Earth Sciences BA program, students will be able to:

1. Demonstrate comprehensive knowledge of geoscience.
2. Create and design effective professional oral, poster and written presentations.
3. Use their quantitative reasoning and/or problem solving skills to interpret and evaluate geological and environmental processes.
4. Arrange geological and/or environmental data in the field in order to formulate hypotheses and design further investigations.
5. Produce and assess data using modern technology and instrumental analysis and be able to evaluate the results.