

# Earth and Environmental Sciences, Minor

## Requirements

The undergraduate minor in earth and environmental sciences requires a minimum of 15 s.h. selected from earth and environmental sciences BS courses. Students must maintain a grade-point average of at least 2.00 in all courses for the minor and in all UI courses for the minor. Coursework in the minor may not be taken pass/nonpass. CLAS minors may only be earned concurrent with or subsequent to earning a University of Iowa bachelor's degree. They cannot be granted as standalone credentials or as the sole program of study completed at the University of Iowa.

College-level courses in mathematics, physics, chemistry, and biology are usually required as collateral work for earth and environmental sciences students. Those seeking a minor in earth and environmental sciences should be sufficiently prepared in the areas of supporting sciences before they take advanced courses.

The minor in earth and environmental sciences is intended for students who are interested in the fundamentals of geology or earth science as it pertains to a primary major. It is most applicable to students pursuing allied sciences, such as the School of Earth, Environment, and Sustainability's environmental policy and planning or geographic and sustainability sciences majors, or an associated degree in the colleges of Education, Engineering, Liberal Arts and Sciences, or another unit. Completing the minimum requirements for this minor may not adequately prepare a student for an entry-level professional job in geology or the environmental sciences.

The minor in earth and environmental sciences requires the following coursework.

## Foundation Courses

Course #	Title	Hours
One of these for 4 s.h.:		
SEES:1030/ CEE:1030	Introduction to Earth Science	4
SEES:1050	Introduction to Geology	4
SEES:1080	Introduction to Environmental Science	4
SEES:1085	Fundamentals of Environmental Science	4
One of these:		
SEES:2673/ BIOL:2673	Ecology	3
SEES:3020	Earth Surface Processes	3

## Electives

Students must complete at least 8 s.h. in elective courses.

Course #	Title	Hours
At least one of these:		
SEES:1040	Evolution and the History of Life	3-4

SEES:1050	Introduction to Geology	4
SEES:2200	Historical Geology	4
SEES:2310	Introduction to Climatology	3
SEES:2374/ BIOL:2374	Biogeography	3
SEES:2410	Mineralogy	4
SEES:2950	Environmental Conservation	4
SEES:3070	Marine Ecosystems and Conservation	3
SEES:3080	Oceanography	3
SEES:3210	Principles of Paleontology	3
SEES:3220	Evolution of the Vertebrates	3
SEES:3315	Ecosystem Ecology	4
SEES:3320	Earth's Climate System	3
SEES:3330	Sedimentary Geology	4
SEES:3350	Urban Ecology	3
SEES:3360	Soil Genesis and Geomorphology	3
SEES:3380/ CEE:3328	Fluvial Geomorphology	3
SEES:3390	Integrated Watershed Analysis	3
SEES:3500/ IGPI:3500	Introduction to Environmental Remote Sensing	3
SEES:3510	Igneous and Metamorphic Petrology	4
SEES:3570	Light Detection and Ranging (LiDAR): Principles and Applications	3
SEES:3608	Planetary Geology	3
SEES:3840	Structural Geology	4
SEES:4110	Global Biogeochemical Cycles	3
SEES:4310	Climate Change	3
SEES:4490	Elements of Geochemistry	3
SEES:4500/ IGPI:4500	Advanced Remote Sensing	4
SEES:4600	Biogeography, Ecology, and Conservation of Mammals	4
SEES:4630	Hydrogeology	4
SEES:4640	Contaminant Hydrogeology	3
SEES:4720	Paleoclimatology	3
SEES:4760	Mineral and Petroleum Exploration Geology	3
SEES:4790	Applied Environmental Geology	3
SEES:4800	Environmental Geophysics	3
BIOL:1261	Introduction to Botany	4
BIOL:1411	Foundations of Biology	4
BIOL:1412	Diversity of Form and Function	4
BIOL:2246	Entomology Lab	4
CEE:4150/CBE:4420	Environmental Chemistry	3
CHEM:3120	Spectroscopy and Separations	3
CHEM:4760	Radiochemistry: Energy, Medicine, and the Environment	3
At least one of these:		

SEES:2001	Second-Year Field Trip for Earth and Environmental Sciences	1
SEES:2831	Earth and Environmental Field Methods	3
SEES:3001	Third-Year Field Trip for Earth and Environmental Sciences	1
SEES:3095	Field Ecology	4
SEES:3096	Winter Ecology	2
SEES:3097	Introduction to Bird Study	2
SEES:3160	Field Trip	1-3
SEES:3230	Prairie Restoration	3
SEES:4001	Fourth-Year Field Trip for Earth and Environmental Sciences	1
SEES:4010	Field Methods in Physical Geography	3
SEES:4680	Field Methods in Hydrologic Science	3
CHEM:3430	Analytical Measurements	3

approved Iowa Lakeside Laboratory courses (prefix IALL)

**Third Year**

**Fall**

Minor: earth and environmental sciences elective course <sup>c</sup>	3 - 4
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**Hours 3-4**

**Spring**

Minor: earth and environmental sciences elective course <sup>c</sup>	3 - 4
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**Hours 3-4**

**Fourth Year**

**Fall**

Minor: field study course <sup>c</sup>	1 - 4
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**Hours 1-4**

**Total Hours 14-19**

a Take one course from SEES:1030, SEES:1050, SEES:1080, SEES:1085.

b SEES:3020 is typically offered in fall semesters only. Check MyUI for course availability since offerings are subject to change.

c Students must complete at least 8 s.h. of earth and environmental sciences electives. See the General Catalog for list of approved courses.

**Academic Plans**

**Sample Plan of Study**

Sample plans represent one way to complete a program of study. Actual course selection and sequence will vary and should be discussed with an academic advisor. For additional sample plans, see MyUI.

**Earth and Environmental Sciences, Minor**

Course	Title	Hours
<b>Academic Career</b>		
<b>Any Semester</b>		
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Coursework in the minor may not be taken pass/nonpass.		
<b>Hours</b>		<b>0</b>
<b>First Year</b>		
<b>Fall</b>		
Minor: foundation course <sup>a</sup>		4
<b>Hours</b>		<b>4</b>
<b>Second Year</b>		
<b>Spring</b>		
SEES:3020 or SEES:2673	Earth Surface Processes <sup>b</sup> or Ecology	3
<b>Hours</b>		<b>3</b>