

Current Degree Requirements: Bachelor of Science in Environmental Sciences – Pre 2019

University Core and General Requirements

Natural Science Courses (46 semester hours)

EEES 2010	Introduction to Environmental Studies	3
EEES 2100, 1020	Fundamentals of Geology, Geology Laboratory	4, 1
EEES 2150, 2160	Biodiversity, Biodiversity Laboratory	4, 1
EEES 3100 or	Surficial Processes	3
EEES 2400 or	Oceanography	3
EEES 4240	Soil Science	3
EEES 2500	Computer Applications in Environmental Science	1
EEES 2510	Advanced Computer Applications	2
EEES 3050, 3060	Fundamentals of Ecology, Ecology Laboratory	3, 1
EEES 3900	Environmental Science Readings and Communication	3
EEES 4970	Environmental Capstone	3
CHEM 1230, 1280	General Chemistry I, Chemistry I Laboratory	4, 1
CHEM 1240, 1290	General Chemistry II, Chemistry II Laboratory	4, 1
MATH 1750, 1760	Mathematics for the Life Sciences	4, 3
MATH 2640	Statistics for Biomedical and Environmental Science	3

Social Science Courses (9 semester hours)

GEPL 3900	Environmental Planning	3
PSC 4340	Environmental Policy	3
ECON 3240	Environmental Economics	3

**PSC 4340, ECON 3240 and GEPL 3900, required for the ENSC degree, may be used to fulfill the 9-hour distributive requirement in this area.*

Humanities Course Requirement (3 semester hours)

PHIL 3180	Environmental Ethics	3
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** PHIL 3180, required for the ENSC degree, may be counted toward the 15-hour distributive requirement in this area.*

Areas of Concentration

For the ENSC degree, all students must have an area of concentration in a Natural Science department. For departments other than this one, the requirement is at least 21 hours of course work. Most ENSC majors elect one of the two concentrations within the Department for their concentration (biology or geology), but a number of concentrations are available:

- [Biology Concentration](#)
- [Geology Concentration](#)
- [Chemistry Concentration](#)

I. Biology Concentration

In addition to the courses listed above, students electing this area of concentration take:

BIOL 2170, 2180 Fundamentals of Life Sciences with laboratory 5

EEES 4150 Evolution 3

Select at least three courses from the following:

EEES 3810 Science of Gardening 3

EEES 4250 Soil Ecology 3

EEES 4350 Ecol. and conservation of Reptiles and Amphibians 3

EEES 4480 GIS Applications in Environmental Sciences 3

EEES 4490 Remote Sensing 3

EEES 4730 Aquatic Ecology 3

EEES 4750 Conservation Biology 3

EEES 4760 Landscape Ecology 3

EEES 4790 Ecology Field Trip 3 or 4

EEES 4980** Special Topics: Advanced Undergraduate 3 or 4

EEES 4910 Directed Research 3 or 4

*** Depends on content of special topics course and requires consent from departmental advisor*

II. Geology Concentration

In addition to the courses listed above, students electing this area of concentration take:

EEES 3210 Mineralogy/Petrology 3

EEES 3220 Sedimentary Petrology & Stratigraphy 3

EEES 3310 Structural Geology & Mapping 3

And at least three additional EEES geology courses at the 3000-4000 level:

EEES 3100** Surficial Processes 3

EEES 4100 Glacial Geology 3

EEES 4200 Quaternary Geology 3

EEES 4220 Environmental Geochemistry 3

EEES 4240** Soil Science 3

EEES 4410 Hydrogeology 3

EEES 4450 Hazardous Waste Management 3

EEES 4480** GIS Applications in Environmental Sciences 3

EEES 4490** Remote Sensing 3

EEES 4610 Geophysics 3

EEES 4630 Numerical Methods in Geophysics 3

EEES 4650 Geology Field Trip 3

EEES 4920 Senior Geology Seminar 2

EEES 4980* Special Topics: Advanced Undergraduate 3-4

** *Depends on content of special topics course and requires consent from departmental advisor*

III. Chemistry Concentration

In addition to the courses listed above, students electing this area of concentration take:

CHEM 2410 Organic Chemistry I
CHEM 2420 Organic Chemistry II
CHEM 3310 Analytical Chemistry
CHEM 3360 Analytical Chemistry Laboratory
EEES 4450 Hazardous Waste Management

Select two of the following:

CHEM 3810** Chemistry of Sustainable Energy Resources
CHEM 4200** Green Chemistry
CHEM 4210 Environmental Chemistry
CHEM 3510 Biochemistry I
EEES 4220 Environmental Geochemistry

* Depends on content of special topics course or Directed Research and requires consent from departmental advisor

** Only one of each of the following pairs of courses can be taken for concentration credit:

EEES 3100 and 4240
EEES 4480 and 4490
CHEM 3810 and 4200
EEES 2015 and 2200

Other Concentrations

Other concentration tracks are also available, such as in Physics, Mathematics, or Astronomy; however, few students opt for these.

Internship

All students majoring in ENSC participate in environment-related projects with a government agency, University laboratory, private corporation, non-profit organization, or other approved sponsor. This experience must last for at least 100 hours, and must be approved in advance by an Environmental Sciences advisor. A written report on the internship is required. Up to 3 hours of course credit may be granted for the internship by enrolling in EEES 4940 (internship); however, credits earned in this way may not be substituted for required courses in the area of concentration. This requirement may be fulfilled at any time prior to graduation. Click [here](#) for internship guidelines and instructions for internship reports, and [here](#) for some ideas for internship opportunities.

Exchange Program

Students with strong academic records may wish to participate in our exchange program with the University of Hertfordshire (England). Participants spend their junior year studying at Hertfordshire. Courses taken there transfer back to Toledo, and students graduate on schedule. Hertfordshire is one of only twelve Environmental Science programs in the United Kingdom receiving a rating of "excellent" by their accrediting agency.