Environmental Science (BA/BS)

Work alongside world-class scholars and researchers, develop concrete skills and analytical abilities, and gain real-world experience with the environmental science major. You will learn from an interdisciplinary approach to the natural sciences—including biology, geology, chemistry, physical geography, and data analysis—and gain an understanding of how social sciences, policy, humanities, and design inform our approaches to solving environmental issues.

The environmental science major is flexible, allowing you to tailor coursework to meet your specific educational and career goals. We also prioritize practical learning experiences where you will link theory to practice and build transferable skills through internships, research, and community involvement. This major is designed for students who want to focus on careers in fields such as conservation biology; pollution prevention and abatement; climate and the atmosphere; water resources; and ecosystem protection, restoration, and management.

Program's Admission Requirements

Please visit the program's website (https://cas.uoregon.edu/envs/apply/).

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Articulate the contributions from the social sciences, natural sciences, and humanities in understanding and addressing environmental issues.
- Discuss major root causes of environmental problems and avenues for addressing them.
- Discuss several key concepts within the field of environmental sciences (e.g., biodiversity and biological conservation, climate change, watershed health, water and nutrient cycles, energy flows), drawing on interdisciplinary perspectives.
- Demonstrate critical thinking and communication skills, including the ability to: a) Critically analyze environmental information, data and problems; b) Interpret scientific communication, including writing, figures, and tables; c) Synthesize diverse information sources; d) Communicate effectively through written and oral communication.

The Environmental Science major is customizable, allowing students to tailor their coursework to meet specific education and career goals. Students can concentrate on a focal area of their choosing and select from a variety of courses across scientific and other disciplines. The major requires a minimum of 112 credits including 60 upper-division credits. Except for ENVS 401-409, all courses applied to the major or minor must be graded, and a C- or better must be earned in all graded courses. As many as four upper-division courses may be used to fulfill the requirements of another major.Major requirements sheets containing detailed information about specific courses are available on the Enviornmental Studies website, in the Environmental Studies office, or by visiting an advisor in Tykeson Hall.

Environmental Science Major Requirements

The major requires a minimum of 112 credits including 60 upper-division credits. Upper-division credits may be earned through coursework or through a combination of coursework and an honors thesis. Sample course plans are available on the program's website. Major requirements sheets containing detailed information about specific courses that meet the major requirements are available in the program office, from an environmental science advisor, or on the program website (http://envs.uoregon.edu/undergrad/escifocus/).

Courses used to fulfill the major requirements must be taken for letter grade and passed with a grade of C- or better.

Environmental Studies courses 401, 403, 404, 406, 408, and 409 with a mark of Pass (P or P*) can count toward the major requirements.

Code	Title	Credits
Area 1. Lower-Division ESCI Core		
ENVS 201	Introduction to Environmental Studies: Social Sciences	4
ENVS 203	Introduction to Environmental Studies: Humanities	4
Area 2. Math and Statistics		
MATH 246	Calculus for the Biological Sciences I	4
or MATH 251Z	Differential Calculus	
MATH 247	Calculus for the Biological Sciences II	4
or MATH 252Z	Integral Calculus	
Approved statistics course		4
Approved course in analytical approaches		4
Area 3A. Natural Science		
Two lower-division introductory sequences in focal area		24
Up to three approved lower-division introductory courses in nonfocal area [1]		12
Six upper-division natural science courses in focal area (life sciences or earth and physical sciences)		24
At least two upper-division courses in nonfocal area [1]		8
Area 3B. Upper-Division Soc Sci, Policy, Humanities and Design		
Three courses from the areas of social science, policy, humanities, or design (no more than one course per area)		12
Area 4. Environmental Issues		
ENVS 411	Environmental Issues: [Topic]	4
or ENVS 425	Environmental Education Theory and Practice	
or ENVS 427	Environmental and Ecological Monitoring	
Area 5. Practical Learning Experience		
Choose from one of several approved practical learning experience options. These include internships, participation in the Environmental Leadership Program, research experiences with UO faculty members, and honors thesis.		4
Total Credits		**112**

[1] Five courses total are required for nonfocal area.

Four-Year Degree Plan

The degree plan shown is only a sample of how students may complete their degrees in four years. There are alternative ways. Students should consult their advisor to determine the best path for them.

Bachelor of Arts in Environmental Science (Life Science Focus)

Course	Title	Credits Milestones
First Year		
Fall		
Core-education course in arts and letters		4
CH 221Z	General Chemistry I	4
First term of 1st-year second-language sequence		4
MATH 111Z	Precalculus I: Functions	4
	Credits	**16**
Winter		
WR 121Z	Composition I	4
CH 222Z	General Chemistry II	4
Second term of 1st-year second-language sequence		4
MATH 112Z	Precalculus II: Trigonometry	4
	Credits	**16**
Spring		
ENVS 203	Introduction to Environmental Studies: Humanities	4
CH 223Z	General Chemistry III	4
Third term of 1st-year second-language sequence		4
MATH 251Z	Differential Calculus	4
	Credits	**16**
Second Year		
Fall		
First term of 2nd-year second-language sequence		4
MATH 252Z or MATH 247	Integral Calculus or Calculus for the Biological Sciences II	4
BI 221Z	Principles of Biology I: Cells	5
Core-education course in social science		4
	Credits	**17**
Winter		
Second term of 2nd-year second-language sequence		4
ENVS 201	Introduction to Environmental Studies: Social Sciences	4
BI 222Z	Principles of Biology II: Organisms	5
MATH 425	Statistical Methods I	4
	Credits	**17**
Spring		
Third term of 2nd-year second-language sequence		4
WR 122Z or WR 123	Composition II or College Composition III	4
BI 223Z	Principles of Biology III: Ecology and Evolution	5
ERTH 305	Dinosaurs	4
	Credits	**17**
Summer		
ERTH 201	Dynamic Planet Earth	4
ERTH 202	Earth's Surface and Environment	4
ERTH 203	History of Life	4
	Credits	**12**
Third Year		
Fall		
PHIL 340	Environmental Philosophy	4
BI 370	Ecology	5
Core-education course in arts and letters		4
Elective course		4
	Credits	**17**
Winter		
ANTH 362	Human Biological Variation	4
BI 357	Marine Biology	4
Elective courses		8
	Credits	**16**
Spring		
GEOG 341	Population and Environment	4
ENVS 335	Allocating Scarce Environmental Resources	4
Elective courses		8
	Credits	**16**
Fourth Year		
Fall		
BI 380	Evolution	4
Elective courses		8
ENVS 477	Soil Science	4
	Credits	**16**
Winter		
ENVS 427	Environmental and Ecological Monitoring	4
BI 471	Population Ecology	4
Elective courses		8
	Credits	**16**
Spring		
ENVS 429	Environmental Leadership: [Topic]	4
BI 448	Field Botany	4
Elective courses		8
	Credits	**16**
	Total Credits	**208**

Bachelor of Science in Environmental Science (Life Science Focus)

Course	Title	Credits Milestones
First Year		
Fall		
ENVS 201	Introduction to Environmental Studies: Social Sciences	4
WR 121Z	Composition I	4
Core-education group-satisfying course		4
Core-education course that also satisfies a global perspective cultural literacy requirement		4
	Credits	**16**
Winter		
WR 123	College Composition III	4
MATH 111Z	Precalculus I: Functions	4

Core-education courses		8
	Credits	**16**
Spring		
ENVS 203	Introduction to Environmental Studies: Humanities	4
MATH 112Z	Precalculus II: Trigonometry	4
Core-education courses		8
	Credits	**16**
Second Year		
Fall		
CH 221Z	General Chemistry I	4
ERTH 201	Dynamic Planet Earth	4
MATH 251Z	Differential Calculus	4
Cultural literacy course in US: DIA		4
	Credits	**16**
Winter		
CH 222Z	General Chemistry II	4
ERTH 202	Earth's Surface and Environment	4
MATH 252Z	Integral Calculus	4
BI 221Z	Principles of Biology I: Cells	5
	Credits	**17**
Spring		
Core-education course		4
ERTH 203	History of Life	4
CH 223Z	General Chemistry III	4
BI 223Z	Principles of Biology III: Ecology and Evolution	5
	Credits	**17**
Third Year		
Fall		
ANTH 330	Hunters and Gatherers	4
GEOG 341	Population and Environment	4
Core-education courses		8
	Credits	**16**
Winter		
ANTH 361	Human Evolution	4
ANTH 349	Origins of Art	4
BI 222Z	Principles of Biology II: Organisms	5
ENVS 345	Environmental Ethics	4
	Credits	**17**
Spring		
ANTH 472	Primate Conservation Biology	4
ARCH 430	Architectural Contexts: Place and Culture	4
STAT 243Z	Elementary Statistics I	4
	Credits	**12**
Fourth Year		
Fall		
ENVS 404	Internship: [Topic]	4
Elective courses		9
	Credits	**13**
Winter		
ENVS 411	Environmental Issues: [Topic]	4
BI 307	Forest Biology	4
Elective course		4
	Credits	**12**
Spring		
ENVS 429	Environmental Leadership: [Topic]	4
BI 374	Conservation Biology	4
Elective course		4
	Credits	**12**
	Total Credits	**180**