

ENVIRONMENTAL STEM CONCENTRATION, ENVIRONMENTAL STUDIES, BACHELOR OF ARTS - ESES

Major Requirements (54 hours)

Code	Title	Credits
Required		
ENVS 161	Introduction to Environmental Studies	3
ENVS 171	Introduction to Environmental Science	3
ENVS 217	Environmental Policy	3
COMM 418	Seminar on Women, Leadership, and Communication	3
or ENVS 321	Women, Leadership, and the Environment	
ENVS 385	Interdisciplinary Environmental Research	3
ENVS 386	Current Issues in Environmental Studies	1
ENVS 495	Comprehensive Project Seminar	3
Concentration		
Select the following Concentration:		45-56
Environmental STEM Concentration (p. 1)		
Please note that the Earth and Water Science Area Focus is only available to students pursuing the dual degree in Engineering at the University of Notre Dame.		
Total Credits		64-75

Environmental STEM Concentration

Code	Title	Credits
One Environmental Ethics Course		
PHIL 256	Environmental Ethics	3
One Environmental Biology Course		
		4
BIO 316 & 316L	Conservation Biology and Conservation Biology Laboratory	
BIO 323 & 323L	Ecology and Ecology Laboratory	
Environmentally-Related Science Elective		
Select one of the following: ¹		3-4
BIO 308 & 308L	Vertebrate Natural History and Vertebrate Natural History Laboratory	
BIO 316 & 316L	Conservation Biology and Conservation Biology Laboratory	
BIO 323 & 323L	Ecology and Ecology Laboratory	
BIO 332	Ornithology	
CHEM 311	Thermodynamics	
PHYS 343	Thermodynamics	
Area Focus Courses		
Select four courses from one of the following areas:		12-14
Applied Mathematics:		
MATH 231	Calculus III	
MATH 326	Linear Algebra and Differential Equations	

MATH 335	Differential Equations II or MATH 336 Numerical Analysis	
MATH 381	Mathematical Modeling	
Earth and Water Science (at Notre Dame):		
CE 20110	Planet Earth	
CE 20320	Environmental Aquatic Chemistry	
CE 20520	Environmental Mineralogy	
CE 30300	Intro to Environmental Engineering	
CE 30320	Water Chemistry and Treatment	
CE 30455	Environmental Hydrology	
Required Supporting Courses		
CHEM 121 & 121L	Principles of Chemistry I and Principles of Chemistry I Laboratory	8
& CHEM 122 & CHEM 122L	and Principles of Chemistry II and Principles of Chemistry II Laboratory	
PHYS 121 & 121L	General Physics I: Mechanics and Waves and General Physics I Lab	8
& PHYS 122 & PHYS 122L	and General Physics II: Temperature, Electricity, and Light and General Physics II Laboratory	
MATH 131 & MATH 132	Calculus I and Calculus II for STEM majors	4-8
or MATH 133	Theory and Application of Calculus	
Select one of the following:		3-6
MATH 345 & MATH 346	Probability and Statistics (Applied Mathematics focus)	
ACMS 30440	Probability and Statistics (Earth & Water Science focus)	
Total Credits		45-55

¹ With program permission, the following earth or water science courses offered at Notre Dame may be used to fulfill this requirement: CE 20110 – Planet Earth, CE 20520 – Environmental Mineralogy, CE 20320 – Environmental Aquatic Chemistry.

Advanced Writing Proficiency

Students fulfill this proficiency requirement by receiving approval for a portfolio of three writing projects drawn from multiple disciplines contributing to environmental studies. The portfolio will include the paper completed in ENVS 495 Comprehensive Project Seminar; the other two projects included will vary with the student's major concentration and selection of courses.

Senior Comprehensive

The Senior Comprehensive requirement in Environmental Studies is fulfilled by successful completion of ENVS 495 Comprehensive Project Seminar and department approval of the paper and oral presentation based on the student's comprehensive project.