

Environmental Science Program

FACULTY COORDINATING COMMITTEE

Taylor (Chemistry); Foster (Geological Sciences);
McConaughay (Biology); Roos (Physics).

The interdepartmental major in environmental science is sponsored jointly by the departments of biology, chemistry, geological sciences, and physics. The objectives of the program are to provide the student with the necessary background for a professional career in the area of environmental science or entrance into a graduate program.

A student must choose one of four concentrations: environmental science-biology, environmental science-chemistry, environmental science-geological sciences, or environmental science-physics. Each student will be assigned an advisor from the department of the chosen concentration. For all concentrations the student must take the following core courses:

BIO 123, 124 Principles of Biology	8
BIO 460 Ecology	4
BIO 470 Seminar.....	1
CHM 161, 166 General Chemistry	9
CHM 250 Organic Chemistry	4
CHM 315 Environmental Chemistry	3
GES 101, 102 Principles of Earth Science	4
GES 110, 111 Principles of Historical Geology	4
One of the following:	3-4
GES 201 Mineralogy	
GES/BIO 302 Invertebrate Zoology	
GES 312 Structural Geology and Tectonics	
GES 321 Paleontology	
GES 450 Hydrogeology	
Calculus ¹	8
PHY 107, 108 General Physics.....	8

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Each concentration has the following additional requirements:

Biology Concentration

BIO 223 Organismic Biology.....	5
BIO 420 Ecosystems Ecology or	
BIO 463 Plant Ecology	4
Two of the following:.....	7-8
BIO 302 Invertebrate Zoology	
BIO 319 Ethology	
BIO 323 Comparative Anatomy	
BIO 324 Plant Diversity	
BIO 334 Reproduction and Identification of Flowering Plants	
BIO 381 Comparative Animal Physiology	
BIO 395 General Microbiology	

Two additional biology courses approved by the advisor
(3 of these hours may be readings/research).....6-8

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The student must have a grade of C or better in all biology courses.

Geological Sciences Concentration

GES 201 Mineralogy*	4
GES 202 Optical Crystallography.....	4
GES/BIO 302 Invertebrate Zoology*.....	4
GES 312 Structural Geology and Tectonics*.....	4
GES 421 Stratigraphy.....	4
GES 493/494 Special Topics	2

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The student must have a grade of C or better in all geological sciences courses.

*Required if not taken in the core.

Physics Concentration

PHY 110, 201 University Physics**	8
PHY 202 Applied Quantum Physics	3
and the appropriate section of PHY 350 Advanced Physics Experiments	1
Three of the following:.....	9
PHY 320 Optics	
PHY 330 Nuclear Physics	
PHY/BIO 345 Radiation Biology	
PHY 361 Electronics	

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**Replaces PHY 107, 108 in the core.

Chemistry Concentration

CHM 191 Chemical Applications of BASIC Programming.....	1
CHM 320 Analytical Chemistry	4
CHM 351 Organic Chemistry	4
CHM 392 Chemical Literature.....	1
CHM 461 Physical Chemistry.....	3
CHM 530 Advanced Analytical Chemistry.....	4

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¹The biology and geological sciences concentrations require only one semester of calculus (4 hours).