



# Environmental Studies, B.S. *major*

## Geohydrology Emphasis

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Required Credits: 65  
Required GPA: 2.25

### I REQUIRED CORE COURSES

Complete the following courses:

- ENVR 2000 Introduction to Environmental Science (3 credits)
- ENVR 3880 Environmental Controversies (2 credits)
- ENVR 4880 Senior Seminar I (1 credit)

Select 1 of the following courses for 3 credits:

- ENVR 4970 Internship (3 credits)
- ENVR 4990 Thesis (3 credits)

Select 1 of the following courses:

- ENVR 3800 Sustainability Analytics & Modeling (3 credits)
- PSY 3401 Basic Statistics for Research (4 credits)
- SOC 3001 Quantitative Research Methods in the Social Sciences (3 credits)
- STAT 2610 Applied Statistics (4 credits)

Select 1 of the following courses:

- ENVR 3600 Environmental Justice and Sustainability (3 credits)
- ENVR 4210 Environmental Law and Policy (3 credits)
- ENVR 4610 Sustainability: Theory and Practice (4 credits)

Select 1 of the following courses:

- GEOL 3120 Soils (4 credits)  
or BIOL 3120 Soils (4 credits)
- GEOL 3400 Glacial and Pleistocene Geology (3 credits)

### GEOHYDROLOGY EMPHASIS

Complete the following courses:

- GEOG 3231 Introduction to Geographic Information Systems (3 credits)
- GEOL 1110 Physical Geology (4 credits)
- GEOL 2110 Crystals, Minerals and Rocks (4 credits)
- GEOL 3211 Environmental Hydrology (3 credits)
- GEOL 3212 Hydrogeology (3 credits)
- GEOL 3600 Stratigraphy and Sedimentation (3 credits)
- GEOL 3700 Environmental Geophysics (3 credits)

Select 1 of the following courses:

- MATH 1470 Precalculus (5 credits)
- MATH 2471 Calculus I (5 credits)

Select 1 of the following courses:

- PHYS 1101 General Physics I (4 credits)
- PHYS 2101 University Physics I (4 credits)

Select 15 semester credits from the following courses that have not been completed in the core above, or any other related courses (3000/4000) approved in advance by a Center for Sustainability Studies advisor:

- ENVR 3040 Environmental Economics (3 credits)  
or ECON 3040 Environmental Economics (3 credits)
- ENVR 3300 Environmental Management and Safety (3 credits)
- ENVR 3600 Environmental Justice and Sustainability (3 credits)
- ENVR 3840 Wetlands Ecology (3 credits)  
or BIOL 3840 Wetlands Ecology (3 credits)
- ENVR 4050 Geochemistry (3 credits)
- ENVR 4210 Environmental Law and Policy (3 credits)
- ENVR 4220 Sampling and Analysis (4 credits)
- ENVR 4400 Environmental Microbiology (3 credits)
- GEOG 3232 Intermediate Geographic Information Systems (3 credits)
- GEOG 3255 Introduction to Remote Sensing (3 credits)
- GEOG 4130 Biogeography (3 credits)
- GEOG 4140 Landscape Ecology (3 credits)
- GEOG 4265 Spatial Analysis (3 credits)
- GEOG 4275 Advanced Geographic Information Systems (3 credits)
- GEOL 3120 Soils (4 credits)  
or BIOL 3120 Soils (4 credits)
- GEOL 4300 Global Environmental Change (3 credits)

### Program Learning Outcomes | Environmental Studies, B.S.

1. Ability to understand and distinguish environmental problems: It was determined that students are doing acceptably for this outcome, but there is room for improvement. Therefore, for two courses, instructors will give more detailed feedback and expectations for revisions and/or second paper or presentation to foster improved communication skills.
2. Ability to understand and distinguish environmental problems: The graduates will understand and distinguish environmental problems based on review of published literature and other media.
3. Formulate Hypothesis: The graduates will formulate reasonable hypothesis.
4. Experimental design: The graduates will design experiments and statistical procedures.
5. Data analysis and hypothesis testing: The graduates will demonstrate ability for data analysis and hypothesis testing. Also the graduates will formulate conclusions and recommendation for future study.
6. Performance and outcomes assessment: The graduates will demonstrate higher level of performance than sophomores on the program level student learning outcomes assessment rubric.
7. Effective Communication Skills: Graduates will attain skills to demonstrate effective written and oral communication.
8. Knowledge in Specialized Field: The graduates will attained learning in the specialized areas of environmental field.

### Suggested Semester Schedule | Environmental Studies, B.S. Geohydrology Emphasis

The following is a list of Environmental Studies Major Courses arranged by year. This schedule is intended to help students plan their courses in an orderly fashion; however, these are only suggestions and this schedule is flexible.

Freshman

- ENVR2000

- MATH1470  
or MATH2471
- PHYS1101  
or PHYS2101
- Core Curriculum requirements
- Emphasis electives

Sophomore (with the emphasis already selected)

- ENVR3600  
or ENVR4210  
or ENVR4610
- ENVR3880
- GEOL1110
- GEOL2110
- ENVR3800  
or SOC3001  
or STAT2610  
or PSY3401
- Core Curriculum requirements
- Emphasis electives

Junior

- GEOG3231
- GEOL3211
- GEOL3700
- Core Curriculum requirements
- Emphasis electives

Senior

- ENVR4880
- ENVR4970  
or ENVR4990
- GEOL3212
- GEOL3400  
or GEOL3120  
or BIOL3120
- GEOL3600
- Core Curriculum requirements
- Emphasis electives