



## Environmental Studies, B.S. *major*

### Ecosystem Emphasis

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A total of 120 semester credits are needed for the **Environmental Studies, Ecosystem emphasis B.S.** degree and include the following:

- 40 upper division credits (level 3000/4000)
- 59 required major core credits
- Completion of Core Curriculum credits (Minnesota Transfer Curriculum [MnTC] Goal Areas 1-10) - required for all baccalaureate degrees
- Completion of BSU Focus and Nisidotaading Course Requirements

#### Dual Degrees

Students wishing to complete two degrees concurrently, (example: Bachelor of Science and Bachelor of Arts) must complete a minimum of an additional 30 credits above the required 120 credits.

#### Multiple Credentials

Any additional major, minor or certificate in a degree must have at least 6 credits of course work not used to meet the requirements of another major, minor or certificate in the degree.

Required Credits: 59

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)

### ECOSYSTEM STUDIES EMPHASIS

Select 2 of the following courses:

- BIOL 1120 General Biology: Evolution And Ecology (3 credits)
- BIOL 1400 Cellular Principles (4 credits)

- BIOL 1500 Diversity of Life (4 credits)
- CHEM 1111 General Chemistry I (4 credits)  
or CHEM 2211 Principles of Chemistry I (4 credits)
- CHEM 1112 General Chemistry II (4 credits)  
or CHEM 2212 Principles of Chemistry II (4 credits)
- GEOL 1110 Physical Geology (4 credits)
- GEOL 1120 Intro to Fossils and History of Planet Earth (4 credits)
- PHYS 1101 General Physics I (4 credits)  
or PHYS 2101 University Physics I (4 credits)
- PHYS 1102 General Physics II (4 credits)  
or PHYS 2102 University Physics II (4 credits)

Select 34 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 3700 Natural Resource Management (3 credits)
- ENVR 3840 Wetlands Ecology (3 credits)  
or BIOL 3840 Wetlands Ecology (3 credits)
- ENVR 4110 Environmental Chemistry (3 credits)
- ENVR 4200 Wastewater Treatment (3 credits)
- ENVR 4210 Environmental Law and Policy (3 credits)
- ENVR 4400 Environmental Microbiology (3 credits)
- GEOG 2100 Introduction to Physical Geography (3 credits)
- GEOG 3231 Introduction to Geographic Information Systems (3 credits)
- GEOG 3232 Intermediate Geographic Information Systems (3 credits)
- GEOG 3255 Introduction to Remote Sensing (3 credits)
- GEOG 3630 Conservation Biology (3 credits)  
or BIOL 3630 Conservation Biology (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 3211 Environmental Hydrology (3 credits)
- GEOL 3212 Hydrogeology (3 credits)
- GEOL 3700 Environmental Geophysics (3 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. Ecosystems 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**

- CHEM1111  
or CHEM2211
- ENVR2000
- GEOL1110
- Core Curriculum requirements
- Emphasis electives

#### **Sophomore (with the emphasis already selected)**

- ENVR3880
- GEOL3400  
or GEOL3120  
or BIOL 3120
- ENVR3600  
or ENVR4210  
or ENVR4610
- ENVR3800  
or SOC3001  
or STAT2610  
or PSY3401
- Core Curriculum requirements
- Emphasis electives

#### **Junior**

- Core Curriculum requirements
- Emphasis electives

#### **Senior**

- ENVR4880
- ENVR4970  
or ENVR4990
- Core Curriculum requirements
- Emphasis electives