

Justification for Environmental Science Revisions and Course Actions

Statement of Justification:

Revising the Environmental Science minor creates an essential element of a comprehensive Environmental Science Academic Program. Other elements of the revised ES Academic Program include a revised B.S. degree in Environmental Sciences, and a reconstitution of the ES faculty. The goal is to provide ES students with a wide range of careers and additional education opportunities.

The Environmental industry in the United States is a \$265 billion annual business involving more than 32,000 individual companies. In addition to the public sector, many state and federal agencies, and non-governmental agencies, have mandates to manage environmental and natural resources and employ environmental scientists. About 70 students are choosing a minor in Environmental Science, indicating substantial interest.

The current Environmental Science minor at NC State does not require that students take an Environmental Science course (ES 100).

The proposed changes to the current Environmental Science minor would allow students to select three of the four courses in the proposed Environmental Science core. The ES Core is designed to provide an introduction to basic concepts of environmental science, to improve interdisciplinary understanding of environmental science and to enhance analytical and communication skills. Students would also select two additional courses from the existing course list for ES minors.

Statement of Academic Minor Program Objectives:

The Environmental Science minor allows students to connect the topics from their major to the compelling, contemporary issues that connect humans to the environment. The minor potentially includes courses and content from all academic units to provide links between disciplines and to provide a foundation for analysis of environmental issues.

List of Courses constituting the Proposed Minor:

Choose any three courses from the ES Core:

ES 100: Introduction to Environmental Science

ES 200: Climate Change and Sustainability

ES 300: Energy and the Environment

ES 400: Analysis of Environmental Issues

2 Courses from the existing list of courses

Catalog Description of Proposed Minor:

The Environmental Science minor allows students to connect the topics from their major to the compelling, contemporary issues that connect humans to the environment. The minor potentially includes courses and content from all academic units to provide links between disciplines and to provide a foundation for analysis of environmental issues.

Administration of the Minor:

Dr. William Winner, Ph.D wewinner@ncsu.edu
2231 Jordan Hall Addition
515-5780

Requirements for Admission and Completion of the Minor:

Any student with an interest in Environmental Science minor should see the contact person listed below. Students must apply to the Environmental Science Minor Administrators for admission to the minor and have a minimum overall grade point average of 2.0 to be admitted to the minor. The Environmental Science Minor Administrators will review the student's record to audit and certify that the student has completed the requirements for the minor. The minor must be completed no later than the semester in which the student expects to graduate from his or her degree program. Paperwork for certification should be completed no later than during the registration period for the student's final semester at NC State.

Statement on Other Departments Likely to be Affected and Summary of Consultations with those Departments: The proposal for revising the ES minor was posted on the ESNR website, and requests for comments were sent to all colleges. The revisions of the ES minor will not affect course enrollments in other academic units.

Current Enrollment: Currently the number of enrolled students is 70.

Upon approval of the revised ES minor, the process of discontinuing the existing minor includes:

1. No new students will be enrolled in the old minor.
2. Students currently enrolled in the old minor will be allowed to complete it.
3. Students enrolled in the old minor can choose to transfer to the new minor.
4. When all students have finished the old minor, and adequate time passes, the old minor will be discontinued.

Proposed Minor

Environmental Science

Environmental Sciences Academic Program

[Description](#) | [Requirements](#) | [Required Courses](#) | [Elective Courses](#) | [Admissions/Certification of Minor](#) | [Contact](#)

Description

The Environmental Science minor allows students to connect the topics from their major to the compelling, contemporary issues that connect humans to the environment. The minor potentially includes courses in all academic units to provide links between disciplines and to provide a foundation for analysis of environmental issues.

Requirements

To complete the ES minor students must take three of the ES Core courses earning 9 Cr with a C- or better, grade in each course. Students must then complete two additional elective courses from approved list.

Required Courses: Select three courses (9 Cr.) of the Environmental Science Core Course list.

[ES 100](#) Introduction to Environmental Science

[ES 200](#) Climate Change and Sustainability

[ES 300](#) Energy and the Environment

[ES 400](#) Analysis of Environmental Issues

Elective Courses (15 credit hours)

Choose two (2) courses from the below list. Substitutions may be made with minor advisor approval.

Group I - Biological Science

[ZO \(MEA\) 220](#) Marine Biology

[ZO \(FW\) 221](#) Conservation of Natural Resources

[ZO 260](#) Evolution, Behavior, and Ecology

[BIO 181](#) Introductory Biology: Ecology, Evolution, and Biodiversity

[FOR 252](#) Introduction to Forest Science

Group II - Physical Science

[MEA 101](#) Geology I: Physical

and [MEA 110](#) Geology I: Laboratory

[MEA 130](#) Introduction to Weather and Climate

and [MEA 135](#) Introduction to Weather and Climate Laboratory

[MEA 140](#) Natural Hazards and Global Change

[SSC 200](#) Soil Science (4 cr)

[MEA 200](#) Introduction to Oceanography
[CE 373](#) Fundamentals of Environmental Engineering

Group III - Social Science

[IDS 201](#) Environmental Ethics (formerly MDS 201)
[IDS 220](#) Coastal and Ocean Frontiers (formerly MDS 220)
[IDS 303](#) Humans and the Environment (formerly MDS 303)
[STS 322](#) Technological Catastrophes (formerly MDS 322)
[PHI 422](#) Philosophical Issues in Environmental ethics
[PS 320](#) U.S. Environmental Politics
[PS 336](#) Global Environmental Politics
[LAR 221](#) Introduction to the Environment and Behavior

Group IV - Advanced Courses

[MEA 300](#) Environmental Geology
[SSC 361](#) Role of Soils in Environmental Management
[FOR 460](#) Renewable Resources Policy and Management
[ET 410](#) Toxic Substances and Society (formerly MDS 410)
[EC 436](#) Environmental Economics
[FW \(ZO\) 430](#) Fisheries and Wildlife Administration
[ZO 403](#) Invertebrate Zoology Laboratory
[HI 440](#) American Environmental History
[NR 406](#) Conservation of Biological Diversity (formerly MDS 406)
[SOC 450](#) Environmental Sociology

Admissions and Certification of Minor

Admissions

Any student with an interest in Environmental Science minor should see the contact person listed below. Students must apply for admission to the minor and have a minimum overall grade point average of 2.0 to be admitted to the minor.

Certification

The Environmental Science Committee will review the student's record and certify that the student has completed the requirements for the minor. The minor must be completed no later than the semester in which the student expects to graduate from his or her degree program. Paperwork for certification should be completed no later than during the registration period for the student's final semester at NC State.

Contact Person

Dr. William E. Winner
2231 New Jordan Hall
919.515.5780
wewinner@ncsu.edu

Current Minor

Environmental Science

Department of Forestry and Environmental Resources

College of Natural Resources

[Description](#) | [Requirements](#) | [Required Courses](#) | [Elective Courses](#) | [Admissions/Certification of Minor](#) | [Contact](#)

Description

The Environmental Science minor allows students to connect the topics from their major to the compelling, contemporary issues that connect humans to the environment. The minor includes courses in natural and social sciences to provide links between disciplines and to provide a foundation for analysis of environmental issues.

Requirements

- Completion of 15 credit hours
- Grade of 'C-' or better in each course.

Required Courses: None

Elective Courses : 15 Credit Hours

Choose one (1) course from EACH of the following categories, AND one (1) additional course from any of the groups. Substitutions may be made with minor advisor approval.

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[ZO \(FW\) 221](#) Conservation of Natural Resources

[ZO 260](#) Evolution, Behavior, and Ecology

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