

North Carolina State University Course Action Form**ES 400 – Analysis of Environmental Issues****Proposal Type:** New Course**Proposed Date:** Jan. 11, 2010**Department/Program:** Environmental Sciences Academic Program**Abbreviated Title:** Analy. of Environmental Issues**Scheduling:** Fall, in Every Year**Offerings:** On-Campus**Credit Hours:** 3**Contact Hours****Lecture/Recitation:** 3**Grading:** ABCDF or S/U**Enrollment per Semester:** 15**Enrollment Maximum per Section:** 30**Multiple Sections:** TBD**Repeatable:** No**Catalog Description**

A capstone course for students in Environmental Sciences or related majors. The course teaches use of analytical approaches for solving environmental problems, and for communicating results. The course emphasizes development of student projects that lead to environmental decision-making, such as devising a resource management plan, developing a predictive model, prioritizing risk, identifying tipping points, designing new software or technologies, or predicting outcomes of environmental policies. Individual student projects fit within a team framework to simulate a work environment. Students enhance writing and seminar skills.

Curriculum/Minors for Which Course is Designed

Environmental Sciences B.S.

Environmental Science Minor

Course Justification

The proposed course will contribute to the long-standing, academic goal of defining the relationships between humans and the environment. The need for humans to seek rational approaches for coping with environmental issues drives much of the thinking in disciplines including natural and social sciences, engineering materials, humanities, design and education. The course will contribute to the need for NC State to address a basic, fundamental area of human need for knowledge. ES 400 is one of the ES Core courses that include a progression of increasing student effort in building independent and team projects. The lectures are fully dedicated to teaching skills students need to complete team projects. The course is the last of a four course sequence that are a progression of increasing effort in building student projects.

Previous Enrollment

This course has never been offered and has no enrollment data.

Resources Statement

This course has not been previously offered, and will be offered by Dr. William E. Winner.

Consultation With Other Departments

Materials describing the course were posted on the ESNR website, and notices inviting comments were sent to all colleges.

Prerequisites & Co-Requisites

None.

Instructors Responsible for Course

William E. Winner

Dual-Level Course

Yes, course is a dual-level course.

DRAFT

Course Syllabus

ES 400 – Analysis of Environmental Issues

Section 001**FALL 2010****3 Credit Hours**

Course Description

A capstone course for students in Environmental Sciences or related majors. The course teaches use of analytical approaches for solving environmental problems, and for communicating results. The course emphasizes development of student projects that lead to environmental decision-making, such as devising a resource management plan, developing a predictive model, prioritizing risk, identifying tipping points, designing new software or technologies, or predicting outcomes of environmental policies. Individual student projects fit within a team framework to simulate a work environment. Students enhance writing and seminar skills.

Learning Outcomes

The capstone course is designed to help prepare students for jobs and academic opportunities once they finish their undergraduate degree. Specific skills include:

1. Enhance fundamental skills for analytical thinking, reading, writing, and oral communication.
2. Understand fundamental issues surrounding ethical use of information, attribution, plagiarism, and consequences of misuse of data.
3. Enhance skills needed to succeed in team-work, and to respect all academic disciplines.
4. Become familiar with the pressures of deadlines connected with performance likely encountered in the work place, in graduate school, or in professional training after the undergraduate degree.
5. Discover the empowerment that comes with creating and communicating original thought applied to an issue of personal interest, and to understand how to apply the process to issues that emerge throughout life.

Course Structure

Lectures will be presented in each class session. Ensure students enhance skills for drawing useful, meaningful conclusions about environmental issues. Instruction ensures students know how to find background information, develop tractable questions, develop results, and put results in the context of other issues. Lectures also address issues of ethics in environmental problem solving, data handling, skills in organizing writing and seminars, and approaches to successful team work.

Students will complete projects by contributing a chapter to a team report, and each team will present a seminar on their work at the end of the semester. Students will self-select teams, and project topics. Each class period, the instructor will present lectures on the process of starting and finishing an analytical project related to an environmental issue. Each class will be used to present specific goals for the day and assignments for project development during the week. Each student will prepare individual reports, graded as first, second, and third drafts. Students will also work in teams, contribute their chapter to a final, team report, and present a seminar at the end of the semester. The goal is to reinforce the concepts of producing unique products that have value for environmental decision-making, to provide inquiry based learning, to

present students with real work demands, and to improve written and oral communication skills.

Instructors

William E Winner (wewinner) - *Instructor*

Email: wewinner@ncsu.edu

Web Page: www.ncsu.edu/esnr

Phone: 919-515-5780

Office Location: 2231 Jordan Hall Addition

Office Hours: By Appointment

Course Meetings

None.

Course Materials

Textbooks

None.

Expenses

Students may incur extra expenses associated with the course. Expenses could include photography, photocopying, printing, ordering special materials, and travel. Students will assume the extra expense.

Requisites and Restrictions

None.

General Education Program (GEP) Information

GEP Category

This course does not fulfill a General Education Program category.

GEP Co-requisites

This course does not fulfill a General Education Program co-requisite.

Grading

Grade Components

Component	Weight	Details
First Draft	10 points	
Second Draft	20 points	
Final Draft	50 points	
Seminar	10 points	
Team Report	10 points	

Letter Grades

This Course uses Standard NCSU Letter Grading:

97 ≤ **A+** ≤ 100

93 ≤ **A** < 97

90 ≤ **A-** < 93

87 ≤ **B+** < 90

83 ≤ **B** < 87

80 ≤ **B-** < 83

77 ≤ **C+** < 80

73 ≤ **C** < 77

70 ≤ **C-** < 73

67 ≤ **D+** < 70

63 ≤ **D** < 67

60 ≤ **D-** < 63

0 ≤ **F** < 60

Requirements for Credit-Only (S/U) Grading

In order to receive a grade of S, students are required to take all exams and quizzes, complete all assignments, and earn a grade of C- or better. Conversion from letter grading to credit only (S/U) grading is subject to university deadlines. Refer to the Registration and Records calendar for deadlines related to grading. For more details refer to http://www.ncsu.edu/policies/academic_affairs/courses_undergrad/REG02.20.15.php.

Requirements for Auditors (AU)

Information about and requirements for auditing a course can be found at http://www.ncsu.edu/policies/academic_affairs/pols_regs/REG205.00.5.php.

Policies on Incomplete Grades

If an extended deadline is not authorized by the instructor or department, an unfinished incomplete grade will automatically change to an F after either (a) the end of the next regular semester in which the student is enrolled (not including summer sessions), or (b) the end of 12 months if the student is not enrolled, whichever is shorter. Incompletes that change to F will count as an attempted course on transcripts. The burden of fulfilling an incomplete grade is the responsibility of the student. The university policy on incomplete grades is located at http://www.ncsu.edu/policies/academic_affairs/grades_undergrad/REG02.50.3.php.

Late Assignments

Students are responsible for completing assignments and submitting them by the deadlines given by instructors. Late assignments will only be accepted in the case of verified/documentated emergencies. See the University Attendance Policy: http://www.ncsu.edu/policies/academic_affairs/courses_undergrad/REG02.50.3.php

Attendance Policy

Attendance

Attendance is required. After two unexcused absences, two points may be deducted from the final score for each additional absence. This policy is based upon the NCSU Attendance Policy:

http://www.ncsu.edu/policies/academic_affairs/courses_undergrad/REG02.20.3.php

Absences

In case of emergencies (serious illness, injury, death, or illness in the family, university duties, court attendance, or religious observance), please notify me as soon as possible. This policy is based upon the NCSU Attendance Policy:

http://www.ncsu.edu/policies/academic_affairs/courses_undergrad/REG02.20.3.php

Makeup Work

You are responsible for all work missed and for any assignment announced on the day you were absent. This policy is based upon the NCSU Attendance Policy:

http://www.ncsu.edu/policies/academic_affairs/courses_undergrad/REG02.20.3.php

Academic Integrity

Academic Integrity

Students are required to comply with the university policy on academic integrity found in the Code of Student Conduct found at

http://www.ncsu.edu/policies/student_services/student_discipline/POL11.35.1.php

Students are bound by academic integrity policy as stated in NCSU Code of Student Conduct.

Academic Honesty

See http://www.ncsu.edu/policies/student_services/student_discipline/POL11.35.1.php for a detailed explanation of academic honesty.

Students are required to uphold the University Pledge Honor and exercise honesty in completing every assignment.

Honor Pledge

Your signature on any test or assignment indicates "I have neither given nor received unauthorized aid on this test or assignment."

Electronically-Hosted Course Components

Students may be required to disclose personally identifiable information to other students in the course, via electronic tools like email or web-postings, where relevant to the course. Examples include online discussions of class topics, and posting of student coursework. All students are expected to respect the privacy of each other by not sharing or using such information outside the course.

Electronically-hosted Components: <http://vista.ncsu.edu>

Accommodations for Disabilities

Reasonable accommodations will be made for students with verifiable disabilities. In order to take advantage of available accommodations, student must register with the Disability

Services Office (<http://www.ncsu.edu/dso>) located at 1900 Student Health Center, Campus Box 7509, 515-7653. For more information on NC State's policy on working with students with disabilities, please see the Academic Accommodations for Students with Disabilities Regulation at http://www.ncsu.edu/policies/academic_affairs/courses_undergrad/REG02.20.1.php.

Policy on Discrimination

NC State University provides equality of opportunity in education and employment for all students and employees. Accordingly, NC State affirms its commitment to maintain a work environment for all employees and an academic environment for all students that is free from all forms of discrimination. Discrimination based on race, color, religion, creed, sex, national origin, age, disability, veteran status, or sexual orientation is a violation of state and federal law and/or NC State University policy and will not be tolerated. Harassment of any person (either in the form of quid pro quo or creation of a hostile environment) based on race, color, religion, creed, sex, national origin, age, disability, veteran status, or sexual orientation also is a violation of state and federal law and/or NC State University policy and will not be tolerated. Retaliation against any person who complains about discrimination is also prohibited. NC State's policies and regulations covering discrimination, harassment, and retaliation may be accessed at http://www.ncsu.edu/policies/campus_environ or http://www.ncsu.edu/equal_op. Any person who feels that he or she has been the subject of prohibited discrimination, harassment, or retaliation should contact the Office for Equal Opportunity (OEO) at 515-3148.

Course Schedule

TBD — Week 1 — TBD - TBD

Thursday: Introductions and Course Overview, Define Teams

TBD — Week 2 — TBD - TBD

Tuesday: Lecture 1, Outlines I, Work on Team Outlines

Thursday: Lecture 2, Discuss Analytical Approaches I, Work on Team Outlines

TBD — Week 3 — TBD - TBD

Tuesday: Lecture 3, Discuss Analytical Approaches II, Start Individual Outlines

Thursday: Lecture 4, Discuss Analytical Approaches III, Work on Individual Outlines, Start First Draft

TBD — Week 4 — TBD - TBD

Tuesday: Lecture 5, Discuss Writing Structures I, Teamwork, Work on First Draft

Thursday: Lecture 6, Discuss Writing Structures II, Team Reports to Class, Work on First Draft

TBD — Week 5 — TBD - TBD

Tuesday: Lecture 7, Discuss Writing Structures III

Thursday: Lecture 8, Discuss Writing Structures IV, Individual Reports to Class, Work on First Draft

TBD — Week 6 — TBD - TBD

Tuesday: Lecture 9, Discuss Writing Formats I, Work on First Draft
Thursday: Lecture 10, Discuss Writing Formats II, **Submit First Draft to Team Members for Grading**

TBD — Week 7 — TBD - TBD

Tuesday: Lecture 11, Discuss Misuse of Data I
Thursday: Lecture 12, Discuss Misuse of Data II, and Return First Draft to Authors, Begin Second Draft

TBD — Week 8 — TBD - TBD

Tuesday: Lecture 13, Discuss Attribution and Plagiarism I, and Work on Second Draft
Thursday: Fall Break

TBD — Week 9 — TBD - TBD

Tuesday: Lecture 14, Discuss Attribution and Plagiarism II, Work on Second Draft
Thursday: Discuss Team Reports Formats

TBD — Week 10 — TBD - TBD

Tuesday: Lecture 15, Discuss Case Study I, and Work on Second Draft
Thursday: Lecture 16, Discuss Case Study II, Work on Second Draft

TBD — Week 11 — TBD - TBD

Tuesday: Lecture 17, Discuss Teamwork I, **Submit Second Draft to Instructor**
Thursday: Lecture 18, Discuss Teamwork II, Work on Second Draft

TBD — Week 12 — TBD - TBD

Tuesday: Lecture 19, Discuss Teamwork III, Return Second Draft, Begin Final Draft
Thursday: Lecture 20, Discussion of Seminar Structure and Format

TBD — Week 13 — TBD - TBD

Tuesday: Lecture 21, Discuss Finalizing Chapters , Work on Final Draft of Individual Chapters
Thursday: Lecture 22, Discuss Seminar Structure and Format

TBD — Week 14 — TBD - TBD

Tuesday: Lecture 23, Final Writing Discussion, **Submit Final Draft of Individual Chapters**, Begin Team Report
Thursday: Lecture 24, Final Seminar Discussion, and Individual Reports to Class

TBD — Week 15 — TBD - TBD

Tuesday: Lecture 25, Synthesis, Work on Final Draft Team Report
Thursday: Thanksgiving Break

TBD — Week 16 — TBD - TBD

Tuesday: Student Seminars
Thursday: Student Seminars, **Submit Final Team Report**

SIGNATURE PAGE

COURSE ACTION FOR ES 400

Recommended By

HEAD, DEPARTMENT/PROGRAM

Date

Endorsed By

CHAIR, COLLEGE COURSES & CURRICULA COMMITTEE

Date

COLLEGE DEAN

Date

Approved By

CHAIR, UNIVERSITY COURSES & CURRICULA COMMITTEE

Date

CHAIR, COUNCIL ON UNDERGRADUATE EDUCATION

Date

DEAN OF UNDERGRADUATE ACADEMIC PROGRAMS

Date

Approved Effective Date