

Note: This course action form is incomplete. Some content is yet to be determined.

North Carolina State University Course Action Form

ES 498 – Research

Proposal Type: New Course

Proposed Date: Jan. 11, 2010

Department/Program: Environmental Sciences Academic Program

Abbreviated Title: Research

Scheduling: Fall / Spring, in Every Year

Offerings: On-Campus

Credit Hours: 1-3

Contact Hours

Independent Study/Research: 1-3

Grading: S/U

Enrollment per Semester: 10

Enrollment Maximum per Section: 10

Multiple Sections: TBD

Repeatable:Yes

Catalog Description

Students can earn 1 Cr in ES 498 Research for every 50 hours of research during a semester to a total of 3 Cr for 150 of research in a semester. A student cannot complete more than 3 Cr of ES 498 Research in a single semester, or more than 6 Cr in their program of study. Research can be traditional laboratory and/or fieldwork, or other creative activity. Research will generally involve testing hypothesis or answering research questions. The research process typically includes a survey of background information, development of research hypotheses or questions, stating objectives, gathering information needed to accomplish objectives, obtaining results, and explaining the significance of results.

The student must produce a final report, seminar, or product that can be evaluated. In some cases, research may be accomplished outside academic institutions, but research credits will not be awarded for traditional course work or for internship projects. Typically, the work for 1-3 Cr of ES 498 Research will be completed in one semester. Credits earned in ES 498 counts towards the ES degree for those majoring in ES. Students outside the ES Academic Program may also register for ES 498 Research.

Curriculum/Minors for Which Course is Designed

Environmental Science B.S.

Course Justification

The new course, ES 498 Research, will allow students in the ES Academic Program to earn 1-6 Cr, but not more than 6 Cr, for independent research thereby partially or completely fulfilling the required 3 Cr of “External Learning Experience.” In addition, students will also gain valuable experience helping ensure success in the classroom and improve skills in inquiry-based learning. ES 498 Research is one of a package of five courses designed to expand educational opportunities for ES Students. The four other courses include: ES 495 Special Topics, ES 496 Internship, ES 497 Professional Development Workshop, and ES 499 Thesis.

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ES 498 Research provides academic credit for students who explore the role of inquiry-based learning and discovery in environmental sciences. Students wishing to participate in ES 498 Research must write a Research Proposal signed by the student, an ES Advisor, and the Research Host. The signed proposal is submitted to the ES Advisor and copies given to all parties. A copy of a Research Proposal form is included with the attached course syllabus. Other Research Proposal formats are acceptable as long as the student, ES Advisor, and Research Host sign them.

Students engaged in research may be paid, or unpaid. The key for the student is a meaningful research experience and learning at a rate similar to that occurring in a classroom. Student obtaining research credits must not be used as a source of free, menial labor and the educational objectives of the research activity must be articulated in the Research Proposal.

Grades for ES 498 Research are S/U. At mid-term, the Research Host meets with the student to review the work. The Host submits a written review of progress at mid-term to the ES Advisor. At term end, the Host meets with the student to review the project, and sends an evaluation to the ES Advisor. The ES Advisor submits the grade.

Previous Enrollment

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

Resources Statement

No additional resources are required.

Consultation With Other Departments

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

Prerequisites & Co-Requisites

None.

Instructors Responsible for Course

William E. Winner

Course Syllabus

ES 498 – Research

Section 001

SPRING 2010

1-3 Credit Hours

Course Description

ES 498 Research will help students explore and understand the role of inquiry-based learning and discovery in environmental sciences. ES 498 Research requires a proposal signed by an ES Advisor, and the Research Host. All parties must sign the research proposal before the student can register for ES 498 Research. A copy of the proposal form is included with the attached course syllabus. Students engaged in research may be paid, or unpaid, depending on the Research Host. The key for the student is a meaningful research experience with learning at a rate similar to that occurring in a classroom. Student obtaining research credits shall not be used as a source of free, menial labor and educational objectives of the research activity must be articulated in the contract.

Learning Outcomes

1. Students will increase skills in inquiry-based learning, and the conduct of professional environmental scientists engaged in research.
2. Students will see the process of transferring their academic knowledge into areas of uncertain understanding, and the need to prioritize areas for acquisition of new knowledge.
3. Students will create a research product that is recognized and can be evaluated.
4. Students will become familiar with networking within and between the environmental research communities.

Course Structure

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Students can register for ES 498 Research by preparing a Research Proposal signed by the student, the Research Host, and the ES Advisor. Copies of the signed Research Proposal are submitted to the ES Advisor and given to each party. Any one of the signing parties can terminate the proposed research. If the Research Proposal is terminated prior to the last day to drop classes, the student will drop ES 498 Research and no credit is received. If the Research Proposal is terminated after the last day to drop the class, the student must earn an S or a U grade.

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

None.

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.

Transportation

Students will be required to provide their own transportation for this class. Non-scheduled class time for field trips or out-of-class activities is NOT required for this class.

Safety & Risk Assumptions

None.

Grading**Grade Components****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.

S/U grading will be used for the course. To earn an S grade, for 1-3 Cr of ES 498 Research, students will complete 50-150 hours of research in a setting focused on environmental research. The Research Host will evaluate students at mid-term and at the end of the term, and provide written evaluations of the research to the ES Advisor who submits the grade. The grade will be awarded by evaluating progress towards accomplishing learning outcomes and objectives and by assessing the research product.

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 U 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 U 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/REG02.20.3.php

Students earning 1-3 Cr in ES 498 Research are expected to be complete the activity in one semester. Exceptions may result from unusual situations, beyond student control, and may result in an incomplete grade. Incomplete grades will only be given with prior arrangement with the ES Advisor and the Research Host.

Attendance Policy

Attendance

Students will participate in the research activity by working according to the times agreed to in the Research Proposal. Deviations in the schedule of attendance are appropriate only if agree to in advance by the student and by the Research Host. Failure to comply with the work schedule may result in terminating the Research Proposal and withdrawing from the course, or earning a U grade. 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 the Research Host and ES Advisor 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 the academic integrity policy as stated in the 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 of 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

RESEARCH PROPOSAL

1. Contacts:

Student: _____

Research Host: _____

ES Advisor: _____

2. Location of Research Experience: _____

3. Research Schedule of Work: _____

4. Student's Proposed Research Statement, Objectives, and Products: _____

5. Expected Learning Outcomes: _____

6. Research Host Commitments:

The Research Host acknowledges the requirement to meet at mid-term with the student to evaluate progress towards products and learning objectives. The Research Host acknowledges the requirement to meet at term end with the student to evaluate the final products and progress with learning objectives. The Research Host acknowledges the responsibility for submitting written mid-term and final evaluations, along with a grade recommendation, to the ES Advisor.

7. ES Academic Advisor Commitments:

The ES Academic Advisor acknowledges the requirement to be available to the student throughout the research activity. The ES Advisor acknowledges the requirement to request delinquent mid-term or end of term evaluations, and to submit the grade for the work in a timely fashion.

8. ES Student Commitments:

The ES Student acknowledges responsibility for professional conduct in the research setting. The student recognizes responsibility for performing research related activities specified in this proposal, and that failure to do so can result in an Unsatisfactory grade, or terminating research resulting in no credits. The student acknowledges responsibility for effectively communicating with the ES Advisor and with the Research Host throughout the work period.

The student acknowledges that participation in the research activity is elected and not required. The student assumes full responsibility for any risk, damage, loss, or personal injury that may be sustained from the internship activity.

9. Last day to drop classes in the semester:

10. Signatures:

Student: _____

ES Advisor: _____

Research Host: _____

SIGNATURE PAGE

COURSE ACTION FOR ES 498

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