

## Conservation Ecology, ZO 592 Syllabus, Fall, 2009

### **Course Information:**

Instructor: Nick Haddad  
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Email: [nick\\_haddad@ncsu.edu](mailto:nick_haddad@ncsu.edu)  
Office hours: T 11:30-12:30, or by arrangement

**Lectures:** TH 10:15-11:30, 139 D. Clark

**Course Website:** <http://www4.ncsu.edu/~haddad/Classes/ZO592/zo592.html>

I will regularly update the website with skeletal lecture notes (essentially an extended outline) and with links to papers and other important information.

### **Textbooks:**

Although I do not require it for this class, I strongly recommend *Principles of Conservation Biology*, 3<sup>rd</sup> edition by Groom, Meffe, and Carroll as a useful comprehensive reference to anyone who plans to work as a conservation biologist. Furthermore, there are times when I will skip over what I view to be prerequisites for a graduate class, and Groom, Meffe, and Carroll is a good place to fill in any gaps. It is expected that students will have knowledge of ecology equivalent to an undergraduate text such as *The Economy of Nature*, Ricklefs.

### **Course objectives:**

The class will focus on the concepts and theories in ecology that have the greatest potential for conserving biological diversity. The recurrent question will be: how can we apply ecology to improve conservation of species and biodiversity? There are obvious solutions to most conservation problems that ultimately stem from rapid human population growth and associated habitat destruction. In our class, we will focus on those issues but more extensively on identifying creative applications of ecology and areas of research that will mitigate human impacts on biodiversity.

### **Organization:**

I have organized the schedule to usually focus on one topic per week. Each week, Tuesday's class will emphasize lecture by Dr. Haddad. Thursday's class will include less emphasis on lecture and lots of opportunity for discussion. Papers will be assigned at least one week before discussion. The papers will be either readings from the book, classic papers in ecology or conservation biology, or case studies in conservation or management. Required readings will be available either through a link at the course website, or two copies will be left outside Dr. Haddad's door one week before class. From off campus, most online articles can be obtained only after logging in to your unity account. The discussions in class will be preceded by web-based discussions that are described at the end of this handout.

Discussions will be led by students, and each student will be responsible for leading one discussion. For your discussion, you will be required to meet with Dr. Haddad twice: once at least a week before your discussion to choose papers, and once the Wednesday before the

discussion to outline focal topics for class. During the week of your discussion, you will also have the opportunity to direct online discussion on Vista.

***Grade Assignment:***

*Participation, 35%.* This will include your participation in class discussions, your contribution to web-based discussions, and your performance in leading your specific discussion in class.

*Mid-term, 25%*

*Final paper, 35%* Your final project will be a 15-20 page (double-spaced) research proposal. Your proposal should be written as if for the National Science Foundation, unless you convince me otherwise. There should be a specific section in the proposal on how your research will apply to conservation. You may write a proposal that is related to your thesis or dissertation; however, I do not want to receive a copy of something that you've already written previously, and I do want you to specifically relate your work to conservation. In some cases, I will accept a literature review or an analysis of existing data as an alternative to a proposal, but you must discuss this with Dr. Haddad. Your paper topic must be approved by Dr. Haddad, and a short description of your proposal will be required early in the semester. You will also be required to present your proposal during the last week of class.

*Review of 2 other final papers, 5%.* You will be asked to review two proposals written by your fellow students. You will evaluate its merit for funding. The authors will have the opportunity to incorporate the comments from your reviews before they are submitted for a grade.

***Academic integrity:*** NCSU has an academic code of conduct to which all students will strictly adhere. The work each student turns in for evaluation will be the sole product of that student's effort unless specifically instructed otherwise. NCSU defines academic misconduct as 1) all forms of cheating wherever committed, including, but not limited to, plagiarism, giving or receiving aid on an examination or quiz, copying another student's exam, term paper, report, problem, or laboratory report, 2) theft of examinations and/or exam answers, etc., and 3) receipt of stolen examinations or exam answers, etc.

***Policy on disabilities:*** If you have a disability, please notify Dr. Haddad at the beginning of the semester and provide him with documentation from NCSU Disabled Student Services. He will make every effort to accommodate your needs.

<b>Date(s)</b>	<b>Topic</b>
Aug. 20	The ecology of conservation
Aug. 25, 27	Biodiversity and the Endangered Species Act
Sep. 1, 3	Population viability analysis I: counts
Sep. 8, 10	Conservation genetics
Sep. 15, 17	Population viability analysis II: demographic
Sep. 22, 24	Population viability analysis II: metapopulation
Sep. 29, Oct. 1	Terrestrial reserve design
Oct. 6	Midterm; <i>one page abstract or outline of paper due</i>
Oct. 13, 15	Marine reserve design
Oct. 20, 22	Invasive species
Oct. 27, 29	Climate adaptation
Nov. 3, 5	Ecosystem services and management
Nov. 10, 12	Restoration ecology and adaptive management
Nov. 17, 19	Global conservation hotspots, <i>1<sup>st</sup> draft papers submitted</i>
Nov. 24	Conservation and the human population, <i>paper reviews due</i>
Dec. 1, 3	Presentations, <i>final paper submission</i>

***There will be no final exam for this class***

## Directions for Web-based Discussions

Discussions in class will be preceded by a web-based discussion. The purpose of the web-based discussion is to make sure that all papers are read and thought through in advance, to provide a forum for discussion topics that may go beyond in-class topics, and to provide a basis for in-class discussion. The web-based discussion can be accessed at the following web page: <http://vista.ncsu.edu/>

To get set up on Vista for the first time, go to the homepage (<http://vista.ncsu.edu/>). Log in with your Unity ID and Password. Once logged in, you will be brought to the MyCourses tab. Beneath the Course List header should be a link to the ZO592 home pages. If you do not find ZO592 at Blackboard Vista, then please contact me.

Once the course is established on Blackboard Vista, then all you have to do is click this class (ZO592). On the left toolbar, click on the Discussion tab. You should then see the topic for the week (the first week's topic is 'Week 1: Endangered Species'). Each week, there will be a new topic. To post a new message (for example, to add your question about a paper or papers) then click on 'Compose Discussion Message.' To reply to another student's question, then click on their highlighted message first, before clicking on reply.

**\*\*\*\* Please let me know immediately if you have any difficulties using Vista \*\*\*\***

Each week that there are assigned readings, every student in the class will be responsible for posting one question on our class forum. This will involve 1) a 1-2 sentence summary of an interesting point that you identified in the paper (which does not have to be the most important point), 2) a 1-2 sentence original thought stimulated by part 1, 3) given parts 1 and 2, pose a clear, concise question about the paper. ***Please follow this approach to posting a question; don't write long, rambling posts, as it will discourage other students from reading them.*** I recommend that you not view other student's questions before you post your own, as I will not accept duplicate questions. Questions will be due before class on Tuesday. You will then be required to answer one of the questions posed by another student in the class. In addition, no more than 2 answers will be accepted for any question. Your answer is due before class on Thursday. In the first few weeks of class, I will provide feedback by email if I think you could improve your postings.

**NOTE:** Because I know we all have stressful times during the semester or times that you have to miss for whatever reason, each student will be allowed to take a pass on 2 weeks of Blackboard discussions of their choosing. I keep track of postings, so there is no need to contact me about the weeks you miss.