Conservation Biology

ECOL 3530, Fall Semester 2009

Course Syllabus

Instructors:

Dr. C. Ronald Carroll – rcarroll@uga.edu

Dr. Catherine Pringle-cpringle@uga.edu

Course description:

This 3-credit hour course is an introduction to the rapidly expanding field of conservation biology. We will cover the foundational principles of conservation biology, and use case studies to illustrate these principles in practice. In general, our objective is not for you to memorize an extensive list of names, dates, or equations; rather, our goal is for you to obtain a functional understanding of key concepts, examples, case studies, patterns, and processes in conservation biology. The final course lectures will focus on some major, emerging issues in conservation science. Lecture slides will be posted on the course web site: (**http://www.rivercenter.uga.edu/education/3530/fall09.htm**).

Course textbook:

Essentials of Conservation Biology, 4th edition, by Richard B. Primack.

Course grading scheme:

Grades will be based on a mid-term exam (25%), a *comprehensive* final exam (30%), a term paper project (30%), and a series of *unannounced* short quizzes (15%). The mid-term (Thursday, Oct 8) and final exam (Tuesday, Dec 15) dates are set; under extenuating circumstances, the exam dates can be changed, but you must contact us ASAP to make alternate arrangements. Your term paper will be a critical analysis of a current issue in conservation, such as a pending action under the Endangered Species Act. Further instruction on the term paper will be given out within the first few weeks of class.

You are responsible for all information presented in class, and for all assigned readings (which may include a few in-class assignments, not yet listed below). Reading assignments are shown in the daily syllabus below (bracketed pages); be sure to read each day's assignment *prior to class*. For each chapter, we recommend that you first read the Summary at the end, then read the chapter to flesh out the key points. Think about the Discussion questions both as you read, and before coming to class. If no reading assignment is listed in the syllabus, you're in the clear for that day. You are also responsible for any material posted on the course website – be sure to check it periodically.

Daily schedule:

Week 1

Tuesday (8/18): Course intro. & a brief history of conservation science [3-18]

Thursday (8/20): Conservation as a multi-disciplinary effort [117-129 & Hardin (1968) -- "Tragedy of the Commons"]

Week 2

Tuesday (8/25): Conservation paradigms – traditional & emerging concepts [57-60, 95-102, 205-212, 235-238, 285-287]

Thursday (8/27): Term paper assignment

Week 3

Tuesday (9/1): Biodiversity I – what is it & how is it measured? [23-49]

Thursday (9/3): Biodiversity II – where does it occur & what causes it to vary? [53-70, 147-150]

Week 4

Tuesday (9/8): Imperiled populations I – what makes them vulnerable? [155-164, 245-248, 262-267]

Thursday (9/10): Imperiled populations II – preventing their collapse [283-290, 293-306, 309-320]

Week 5

Tuesday (9/15): Conservation law [455-462]

Thursday (9/17): Etowah Habitat Conservation Plan [***Fowler***]

Week 6

Tuesday (9/22): Ecosystem conservation [***Pringle***: 36-49, 405-424]

Thursday (9/24): Conservation genetics [33-36, 246-254]

Week 7

Tuesday (9/29): Economics of conservation [75-113]

Thursday (10/1): A major conservation partner – Ducks Unlimited [***Matt Dubnik***]

Week 8

Tuesday (10/6): Review session for mid-term exam

Thursday (10/8): **Mid-term exam**

Week 9
Tuesday (10/13): Discuss mid-term & begin lesson on invasive species (*video*)
Thursday (10/15): Invasive species (*continued*) [224-234]
Week 10
Tuesday (10/20): Habitat degradation [***Pringle***: 177-204]
Thursday (10/22): Overexploitation [215-224]
Week 11
Tuesday (10/27): Biological reserves & protected areas – part I [337-368]
Thursday (10/29): Biological reserves & protected areas – part I [368-402]
Week 12
Tuesday (11/3): Coastal ecosystems – complex interactions in a changing world
Thursday (11/5): Restoration ecology [427-444]
Week 13
Tuesday (11/10): Ecotourism – gentle exploitation? [77-85, 103-105]
Thursday (11/12): Disease ecology & conservation medicine [***Hernandez-Divers***: 235-240]
Week 14
Tuesday (11/17): Climate change [205-212]
Thursday (11/19): Choco-Andes Corridor Project – improving livelihoods & protecting biodiversity
Week 15
Tuesday (11/24): ***Thanksgiving break – no class*
Thursday (11/26): ***Thanksgiving break – no class*
Week 16
Tuesday (12/1): Emerging roles for conservation scientists [507-521]
Thursday (12/3): Review session for final exam
Final exam: Tuesday, 15 December, 8-11 am