

Syllabus

Course Objectives: To introduce you to basic ecological theory and practice. Emphasis will be placed on processes within and among populations, communities, and ecosystems. Theoretical, empirical and experimental approaches to ecological problems will be examined and mathematical models will be important. We will examine factors that regulate population growth, competition, predation, herbivory, mutualism, disease, parasitism, dispersal, and habitat selection. We also will investigate factors that structure communities, cause disturbance, modify succession, maintain biodiversity, and regulate community metabolism. The linkage between ecology and evolution will be emphasized.

Text: *Ecology: The experimental analysis of distribution and abundance*, C.J. Krebs, 2001, fifth edition, Benjamin Cummings, San Francisco.

Course Format: The course will be presented in a lecture-discussion format. Students are responsible for reading the assigned chapters before class and arriving sufficiently knowledgeable to answer questions about the day's topic. This course will attempt to improve your ability to think critically, problem solve, synthesize science concepts, and communicate them effectively. Your ability to demonstrate these skills will be assessed using both exams and independent projects.

Grades: You will be evaluated on two activities. First, 55% of your grade will be determined by three equally weighted exams given over the semester. A comprehensive final exam will count for 25% of your grade. To reward class attendance and completing reading assignments before class, quizzes will be periodically given in lecture where you can earn up to 5 bonus points per test. The remaining 20% of your grade will be based on three independent projects. Each project will consist of a Power Point presentation on a topic of ecological importance, and you will be expected to use scientific literature (journals, technical reports) rather than textbooks. Details of the format will be described in class. You will work in groups of 4-5 and the group will submit one report on which your grade will be based. Each group will give a short (5 minute) oral presentation of your findings at least once during the semester. This presentation will provide an introduction to the problem, methods, summary of results in tables and graphs, and discussion of how the results relate to published work and their significance. Your conduct in this course is expected to conform to the GT Student Honor Code (<http://www.honor.gatech.edu/>). I urge you to consult this for a full definition of your rights and responsibilities. Grades will be assigned according to the following scale: 90-100 A, 80-89 B, 70-79 C, 60-69 D, below 60 F.

Attendance: Attendance of all lectures is strongly encouraged since material not covered in the readings will be presented. Bonus point quizzes will be given only in lectures. Class attendance is mandatory for all days when there are presentations or exams. Should you miss a presentation or exam, you must convince the professor that the absence was excusable. Examples of excusable absences include documented illness, death in family, or accident. If you know that you are going to be absent from a required class, you need to notify the professor beforehand. Unexcused absences from presentations or exams will result in a grade of 0.

Professors: Dr. Terry W. Snell, Environ. Science and Technology Bldg, Rm 2240, phone 404 894-8906, terry.snell@biology.gatech.edu, office hours: Monday 1-3, Tuesday 2-4. Dr. Lock Rogers, Cherry Emerson Bldg, Rm 331, phone 404-385-0539, lock.rogers@biology.gatech.edu, office hours: Tuesday 10-12, Thursday 2-4. Dr. Anne Marie Hoskinson Cherry Emerson Bldg, Rm A104, phone 404-385-6517, annemarie.hoskinson@biology.gatech.edu, office hours: Tuesday 9-11, Friday, 12:30-2:30. These office hours represent time that is reserved for seeing students individually. If you have questions concerning course material or want to discuss other topics in biology, please stop by and get acquainted.

Graduate Teaching Assistant: TBA, Office: XXX, Office Hours: XXX