

# Ecology 8000

Fall, 2016

## Course details

Meeting time: 12:30 - 2:00 pm, Tuesday and Thursday

Meeting place: Ecology conference room (Room #12)

Instructors: Ford Ballantyne - Lead (fb4@uga.edu), Craig Osenberg - Module 1 Lead (osenberg@uga.edu), Andrew Park - Module 2 Lead (awpark@uga.edu), Jill Anderson - Module 3 Lead (jta24@uga.edu), John Wares - Module 4 Lead (jpwares@uga.edu)

Teaching assistants: Anya Brown (anyabrown@uga.edu), John Vinson (vinsonje@uga.edu)

Course webpage: <http://courses.ecology.uga.edu/ecol8000-fall2016/>

## Overarching goals

This course will provide an introduction to the practice of Ecology as a basic science. You will be immersed in discussions, exercises and activities that will force you to think about ecological questions and concepts from multiple perspectives, across scales and levels of organization. This will not be a survey of Ecology, but rather an opportunity to become more comfortable and facile addressing challenging questions in Ecology.

## Course organization

The course will be divided into 4 modules with transition days between modules.

### What to expect in a module

Some combination of the following:

- Discussing primary literature
- Small group activities that require in class and out of class work
- Working with real data
- Formulating and analyzing models
- Short writing assignment, e.g. recommendation for management, short proposal
- Designing an experiment
- Debate
- Peer evaluation

### What we expect of you

- Active engagement in discussions and full participation in group work, in and out of class
- Thorough reading of assigned papers
- A constructive and considerate, but critical attitude
- A short paper in the form of a Synthesis or Review, due toward the end of the semester

First day (8/16): **Introduction**

A brief overview of the course, introductions, 3 questions discussion.

Module 1 (8/18-9/6): **Inference and ecological controversies**

This module will focus on deriving inferences in ecology. We will emphasize examples in which controversies exist, in part, because of the application of inferential tools and associated assumptions. As the first module of the course, we also will stress skills required to critically read the literature and effectively lead and participate in discussions.

Module 2 (9/13-9/29): **Ecological stoichiometry**

This module will focus on linking patterns to processes across scales and levels of organization, and familiarize you with theory and dynamic models in Ecology.

MANDATORY FIELD TRIP (10/8-10/9): **Coweeta Hydrologic Laboratory in NC**

During the field trip, you will conceive, conduct and present the results from a study at Coweeta.

Module 3 (10/11-10/29): **Invasions**

This module will emphasize the evolutionary perspective, how different inference can be made at different scales and on translating general concepts into specific hypotheses and experimental manipulations.

Module 4 (11/3-11/29): **Biodiversity and ecosystem function**

This module will focus on the iterative nature of science, namely how hypotheses are generated from observations, how hypotheses can be tested and how the conclusions feedback to refine original hypotheses and experiments.

**ACADEMIC HONESTY:** In this course, all students must uphold their pledge to the University's Honor Code: I will be academically honest in all of my academic work and will not tolerate academic dishonesty of others. All academic work must meet the standards contained in A Culture of Honesty, and each student is responsible for knowing the standards and the meaning of academic honesty. Please refer to the UGA policy, located on the web at <http://honesty.uga.edu/>. Lack of knowledge of what constitutes dishonest work is not an acceptable excuse. It is the instructors responsibility to report cases of suspected academic dishonesty directly to the Office of the Vice President for Instruction.

**SPECIAL NEEDS:** Students with disabilities or health related issues who may need class accommodation should consult with the instructor as soon as possible. Accommodations cannot be provided until a student has gone through The Disability Resource Center (DRC) (<http://drc.uga.edu/about/registerforservices.php>; 542- 8719) and we have discussed appropriate accommodations for this course. Accommodations cannot be provided retroactively. All conversations will be strictly confidential.