

Ecology Core Spring 2014
EEB 509 – 4 credit hours
Dabney 575 2:30-4:30 M,W

Instructors:

Jen Schweitzer (Jen.Schweitzer@utk.edu)

Dan Simberloff (dsimberloff@utk.edu)

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Objectives:

The EEB graduate ecology and evolutionary biology class is intended to provide a rigorous introduction to current knowledge in key, “core” areas of evolution and ecology. Successful completion of this two semester course should bring you to a level of sophistication that allows you to read and critically evaluate the current literature, and to discuss both ecological and evolutionary topics with visiting speakers and (ultimately) search committees and potential employers.

This course is not intended to teach you everything you need to know about ecology and evolution. Instead, we hope to help you develop a foundation of knowledge and confidence upon which to build the specialized knowledge needed for your individual research program and the breadth of knowledge needed to participate in academic science. We also hope that the course and the topics discussed may lead to new collaborations.

This semester the course will focus on hands-on skills and current cutting edge topics in a few topics in ecology as well as practice in synthesis, field skills and data analysis and presentation.

Format:

This course covers a series of modules that represent major conceptual areas within ecology. The course will include a combination of lectures, discussions, in-class exercises and/or homework led by a variety of faculty members. Promoting interaction between diverse faculty and first-year students is an important function of the core. A strong emphasis will be placed on independent reading. Several papers for each module will be made available to students via the course BlackBoard site. These papers will include both classic papers and modern treatments or examples. Some of these papers will be discussed in class, but not necessarily all. Students are expected to have read and studied all papers prior to coming to class. We strongly suggest that you form a reading group to discuss the papers outside of class time.

Assessment:

Your grade in the course will be determined by a series of **written presentations** as well as **homework assignments** (see below). Your grade will also be based on your **preparation** for, and **participation** in, class discussions; 25 points will be allocated to assignments from each of the history, population, community and ecosystem ecology units. Practice in synthesis and writing skills will be made with a formal, publication quality review or meta-analysis that will be undertaken in groups of 1-3. Formal peer review will also help your evaluation and skills in constructive criticism. Practice in field techniques, data analysis and presentation will culminate in a formal poster (and defense) of the field ecology projects.

*A final grade of B or higher is required in this course for students to be classified as making adequate progress in the graduate program. [Note: consult the graduate student handbook on annual progress reports].

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|---|----------------|
| Ecological review/meta-analysis | 100 |
| Peer review of papers | 50 |
| Poster – field ecology project | 100 |
| Homework/Participation (25 pts for ea of the history, population, community and ecosystem units) | 100 |
| | 350 pts |

Grades in graduate study have the following meanings.

- A (4 quality points per semester hour) superior performance.
- B+ (3.5 quality points per semester hour) better than satisfactory performance.
- B (3 quality points per semester hour) satisfactory performance.
- C+ (2.5 quality points per semester hour) less than satisfactory performance.
- C (2 quality points per semester hour) performance well below the standard expected of graduate students.
- D (1 quality point per semester hour) clearly unsatisfactory performance and cannot be used to satisfy degree requirements.
- F (no quality points) extremely unsatisfactory performance and cannot be used to satisfy degree requirements.

Any student who feels s/he may need an accommodation based on the impact of a disability should contact the instructors privately to discuss your specific needs. Please contact the Office of Disability Services at 865-974-6087 in Hoskins Library to coordinate reasonable accommodations for students with documented disabilities.

Schedule

| Date | Topic | Instructor |
|-----------------|------------------------------------|-------------------|
| 8 Jan W | Organization-Intro | Jen |
| 13 Jan M | Intro II – paper topics discussion | Jen/Joe |
| 15 Jan W | History of Ecology | Dan |
| 20 Jan M | No class MLK day | |
| 22 Jan W | History of Ecology | Dan |
| 27 Jan M | Review update/workday | Jen/Joe |
| 29 Jan W | Populations in Space | Heather |
| 3 Feb M | Populations in Space | Heather |
| 5 Feb W | Populations in Space | Heather |
| 10 Feb M | Populations in Space | Heather |
| 12 Feb W | Review update-figures | Jen |
| 17 Feb M | Communities & Analyses | Jim |
| 19 Feb W | Communities & Analyses | Jim |
| 24 Feb M | Communities & Analyses | Jim |
| 26 Feb W | Communities & Analyses | Jim |
| 3 Mar M | Review update/workday | Jen |
| 5 Mar W | Ecosystem Ecology | Jen |
| 10 Mar M | Ecosystem Ecology | Jen |
| 12 Mar W | Ecosystem Ecology-Global Change | Jen |
| 17 Mar M | Spring Break | |
| 19 Mar W | Spring Break | |
| 24 Mar M | Ecosystem Ecology-Global Change | Jen |
| 26 Mar W | Ecosystem Ecology-Global Change | Jen |
| 31 Mar M | Review update-peer review | Jen |
| 2 April W | Field Ecology | Joe/Jen |
| 7 April M | Field Ecology | Joe/Jen |
| 9 April W | Field Ecology | Joe/Jen |
| 14 April M | Field Ecology | Joe/Jen |
| 16 April W | Field Ecology | Joe/Jen |
| 21 April M | Field Ecology | Joe/Jen |
| 23 April W | FE Final Project poster session | |
| 1 May | Final Review papers due | |

**Schedule is subject to change. Advance notice will be given if dates/topics are changed during the semester.*