

Instructor:

Dr. James Fordyce

Email: jfordyce@utk.edu (please include GENERAL ECOLOGY in the subject)

Phone: 974-2925

Office: 540 Hesler Hall

Office hours: Tues 12:30pm – 1:30pm (or by appointment)

Lecture: Tues & Thurs 11:10 – 12:25am, Walters Life Sciences M309

Teaching Assistants:

Riley Bernard <rbernar3@utk.edu>; Tuesday 8:00

Ian Ware Ian Ware <ianmware@gmail.com>; Tuesday 2:30, Thursday 8:00

Rafael Zenni <rzenni@utk.edu>; Thursday 2:30, Friday 9:05.

Communication. Check the Blackboard site and your UTK email frequently. We will post lecture outlines *after* each class period. All handouts, readings, and out-of-class assignments will be posted there. Weekly quizzes will be conducted via Blackboard. Please come and see me during office hours.

Textbook. Ecology, 2nd edition by Cain, Bowman and Hacker. There is a PDF version available, and a looseleaf version, as well as the hardcover—they are all the same but vary in price. Quizzes will focus on the book and other assigned readings.

Other supplemental readings (if needed) will be available on the course website.

Learning Objectives. Ecology is a science aimed at explaining how organisms interact with abiotic and biotic components of their environment and how these interactions affect the distribution and abundance of organisms. The objective of this course is to obtain an understanding of basic ecological processes ranging from population biology to ecosystems, familiarization with the scientific method and the methodology used in ecological research, and an appreciation for the role of ecological processes that shape the Earth's history and future. Your writing skills, analytical, and quantitative abilities, and talents in the field will be reinforced and improved. In short, you will be a more well-rounded biologist and an ecologically aware citizen.

Assessment. To assess how well you meet these learning objectives, you will have comprehensive exams, writing assignments, in-class exercises, online quizzes, and you will spend time in the computer lab enhancing your quantitative skills. You'll also spend time in the field doing several research projects. I do not grade on a curve. Your grades will be based on the following schemes:

Assessment	Points possible
Mid-term exams (2)	120
Final exam	75
Quizzes 5pts * 11	55
Lab points	20
Rapid Ecological Study	100
Final Project	125
Bonus points (from seminars)	(10)
Total	525

Grade	Percentage (%)	Grade	Percentage (%)
A	93-100	C	73-76
A-	90-92	C-	70-72
B+	87-89	D+	67-69
B	83-86	D	63-66
B-	80-82	D-	60-62
C+	77-79	F	0-59

Exams. On exams I will focus mostly on the lecture material, but some information will come from the book. In addition, you will be assigned several supplementary readings, and will be tested on them. The format will include multiple choice, short answer, essay, and simple math problems. All exams are comprehensive, but you should focus most of your study on the "new" material. I will give you a review sheet about one week before each exam.

Quizzes. Weekly online quizzes are 5 points each and will help you stay on top of the reading. They are due by midnight each Monday. Other pop quizzes and in-class assignments may be announced.

Labs. The aim of labs is three-fold. First, I want you to learn the toolskills required to do an ecological study. Second, I hope the principles you learn in lecture will be reinforced in the lab and field. Third, I want you to be stimulated to think creatively, critically, and quantitatively and to identify and understand major ecological patterns in the field. Many of the labs will be conducted outdoors, so be sure you are prepared with rain gear, sturdy shoes, a hat, snacks, water, pens, a field notebook, and a bag to carry all this stuff. Labs always meet in Hesler Room 302.

Final Project. This project is one of the most important parts of the course. I want you to do ecology, and this is your biggest opportunity to do it. I also want you to work with your colleagues because almost nothing in science can be done alone. By the 9th week of the semester, you and 1 or 2 other students will have gone to the field and decided on an idea

for a final project. You will then have about one month to collect the data and prepare the paper. During this month, your group is required to meet with your TA at least two times. We are happy to review procedures, drafts of papers, and statistical analyses. We're really happy to help in almost any way you'd like. More instructions for the final project will be available soon.

Ecology Seminar Series (A.K.A., Bonus Points). Most Fridays at 3:30, the Department of Ecology and Evolutionary Biology has a seminar in Science & Engineering, Room 307. This is a tremendous opportunity for you to learn about many different topics in ecology and to see how different people convey their findings. Once you've attended one of these seminars, write a one-page summary of it and email it to the head TA, Riley, at (rbernar3@utk.edu) and put *BIO 250 EC* in the subject line. The seminar schedule should be posted here: <http://eeb.bio.utk.edu>. If you can't make the seminars, I will post an ecological article by the seminar speaker, and you may write a one page summary of it. You may earn up to 2 bonus points for each talk or paper summary and these write-ups are due one week after each seminar. You may earn no more than 10 total bonus points from seminars during the semester.

Missed And Late Assignments. Only under very special circumstances will I give a makeup exam. You might be able to take a makeup exam if you alert me that you are going to miss it. If you know you are going to miss a lab, you must alert your TA as far in advance as possible. Email is always the best way to contact me or your TA. Unless there are extenuating circumstances, work turned in late will lose 25% of the total available points each day it is late. You cannot make up quizzes.

Any student who feels s/he may need an accommodation based on the impact of a disability should contact me privately to discuss your specific needs.

Schedule:

Day	Lecture	Book Chapter	Lab
22-Aug	Introduction: pattern and process	1	No Labs
27-Aug	Science of ecology	1	RES: Generating Hypotheses
29-Aug	Evolutionary Ecology	6	
3-Sep	Evolutionary Ecology	6	RES: Addressing Hypotheses
5-Sep	Ecology of individuals	4,5	
10-Sep	Ecology of individuals	4,5	RES: Analyzing data
12-Sep	Conditions and resources	2,3	
17-Sep	Individual ecology	7	Toolkit Lab (plants)
19-Sep	Population ecology	8,9,10	
24-Sep	Population ecology	8,9,10	Models Lab
26-Sep	Exam 1		
1-Oct	Interactions between species	11,12,13,14	Toolkit Lab (aquatic)
3-Oct	Competition	11	
8-Oct	Competition	11	Group projects
10-Oct	Predation and parasitism	12,13	
15-Oct	Predator / prey population dynamics	12,13	No Labs
17-Oct	No Class – Fall Break		
22-Oct	Communities	15,16	Group projects
24-Oct	Communities	16,18	
29-Oct	Food webs	19,20	Group projects
31-Oct	Ecosystems	21	
5-Nov	Exam 2		Group Projects
7-Nov	Patterns of species richness	17	
12-Nov	Invasion biology		Group projects
14-Nov	Conservation Biology	22,23	
19-Nov	Biological Invasions		Project presentations
26-Nov	Sustainability		
26-Nov	Global ecology	24	No Labs
28-Nov	No Class -- Thanksgiving Break		
3-Dec	Summary		
11-Dec	Final Exam @ 10:15-12:15 am		