



Biology 269: Ecology Field-Based Laboratory
2 credits: 1 credit lab, 1 credit discussion
The University of Tennessee, Fall 2014



Lab/Discussion: One three hour lab and one hour discussion per week (25 students)

Course Coordinator: Riley Bernard, Biology 269 Head Laboratory TA
Room 114 Hesler: rbernar3@vols.utk.edu

Lab/Discussion Instructor: Evin Carter: ecarte19@vols.utk.edu
-Wednesday 8am-12:05pm Hesler 302
-Friday 8am-12:05pm Hesler 302
Jeremiah Henning: jhennin2@vols.utk.edu
-Tuesday 8am-12:05pm Hesler 302
-Wednesday 12:10pm-4:15pm Hesler 302
Jessica Welch: jwelch14@vols.utk.edu
-Wednesday 12:10pm-4:15pm Hesler 304
-Thursday 8am-12:05pm Hesler 302

Course Learning Goal:

By the end of this course, you'll understand the major ecological patterns in nature and the factors that potentially cause them. Your writing skills, analytical and quantitative abilities, and fieldwork skills will be reinforced, and you will have learned the basics about being a practicing ecologist and an ecologically-aware citizen.

The aim of this course is to learn how ecologists do ecology, reinforce principles learned in lecture and learn to think creatively, critically, and quantitatively by identifying and understanding ecological patterns in the field.

- The Lab will always meet! If there is bad weather (i.e. thunder and lightning), we will rearrange topics, so make sure to meet at H302 or H304 regardless!
- Many of the labs will be spent in the field (with mud, rain, **cold/high temperatures**, biting insects, etc.). Please be prepared – bring water, some snacks, a hat, sunscreen, bug spray and do not wear open-toed shoes or shorts.
- Do not miss labs. If you have to miss a lab for a good reason, make sure you let your Instructor know in advance so that we can discuss alternative arrangements.

Course Learning Objectives (Encompass degree-level learning objectives)

By the end of the course, you should demonstrate proficiency in the following *scientific practices*:

1. Distinguish between, and develop your own, scientifically-appropriate hypotheses and predictions
2. Find and use scientific literature to frame your experimental designs
3. Organize, analyze and interpret your scientific data
4. Communicate your scientific results in written and verbal forms (including creation of figures and tables)
5. Design and carry out your own scientific investigations

COURSE SYLLABUS

Week	Agenda	Where?
Aug. 20-22	Classes begin – No labs/Discussion	
Aug. 26-29	Discussion: Four Decades of Plant Community Change Toolkit Lab 1: Plant Communities	Lab Field: Dean's Woods
Sep. 2-5	Discussion: Patchiness of River Toolkit Lab 2: Aquatic/Soil Invertebrates	Lab Field: 10 Mile GW
Sep. 9-12	Discussion: Statistics for Ecology RES 1: Generating Hypotheses	Field: Ijams
Sep. 16-19	RES 2: Addressing Hypotheses	Field: Ijams
Sep. 23-26	Discussion: On the Practice of Ecology RES 3: Analyzing Data	Lab
Sep. 30- Oct. 3	Discussion: Population Dynamics of the Pipistrelle Bat Models Lab: Stage-structured Population Dynamics *First draft of RES paper due beginning of class	Lab
Oct. 7-10	Discussion: Initiation of Final Group Project plans	Lab
Oct. 14-17	Fall Break – No labs/discussion *Final draft of RES paper due by Tuesday 15th by 5pm	NO Lab
Oct. 21-24	Group Project workday (proposals due)	--
Oct. 28-31	Group project workday	--
Nov. 4-7	Discussion: Group project meeting with TA	Meet with Instructor
Nov. 11-14	Group project workday	--
Nov. 18-21	Discussion: Group project presentations	Lab
Nov. 25-28	Thanksgiving – No labs/discussion	NO Lab
Dec. 2	Project papers due Tuesday, December 5, by 5pm	NO Lab

Final Group Project: By the 7th week, you and 2 others will have gone to the field and decided on an ecological study for a final project. You will then have one month to collect the data and

prepare the paper and a group presentation. During that time your group is required to meet with your Instructor or me at least 2 times. We are happy to review plans, statistical analyses, figures, and drafts of the paper at any time during this process. The final group project paper is to be emailed to your Instructor on 15 December by 5:00pm. More instructions on this final project will be provided in lab.

The Seminar Series (a.k.a., bonus points): Most Fridays at 3:30, the Department of Ecology and Evolutionary Biology has a seminar in Science and Engineering 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 Riley (rbernar3@vols.utk.edu) - these write-ups are due one week after the seminar. You may get up to 2 bonus points for each one. You can get points for attending 5 seminars. If you can't make the seminars, you may read a paper by that speaker (posted on Bb).

ASSESSMENT OF LEARNING

Paper discussions and participation.....	30 points (5 x 6pts)
Rapid Ecological Study Paper.....	100 points (2 x 50pts)
Toolkit Labs.....	20 points (2 x 10pts)
Group project participation.....	25 points
Group project oral presentations.....	25 points
Group project paper.....	100 points
Seminar extra credit.....	10 points (5 x 2pts)
	Total 310 points*

*A maximum of 300 points can be earned.

Final Grades

Final letter grades will be determined by the total percentage of points accumulated as follows:

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	<60%

Support for learning

Course website: <http://online.utk.edu/> (Blackboard).

Communication

- If you can't make office hours, please use your UTK e-mail (spam filters may exclude other addresses) to schedule a meeting.
- Please allow **up to 24 hours** for responses to your e-mails. E-mails will likely not be answered after the workday is over or on the weekends, so please be patient outside of normal work hours.

- Any student who feels that she or he may need accommodations for any sort of physical or learning disability, please make an appointment to see Riley, or stop by her office, and inform your Lab Instructor.

Lab Safety

- You must clean and dispose of laboratory materials as directed by your instructor before leaving lab.
- There will be **NO** food, drink or tobacco products used in the lab **at any time**.
- Personal items should be stowed away and not placed on the lab bench
- **AGAIN:** Many of the labs will be spent in the field (with mud, rain cold/high temperatures, biting insects, etc.). Please be prepared: bring water, some snacks, a hat, sunscreen, bug spray and do not wear open-toed shoes or shorts. Also keep in mind that weather can change quickly in the field, rain gear and an extra layer are strongly recommended

Class Policies

- Policies **MUST** be followed at all times – no exceptions. Violation will result in a loss of points, or dismissal from the lab and/or course
- Discussion is a 1-hour class and Lab is a 3-hour class; you should expect to be at both for the full four hours each week.
- You will be expected to prepare and familiarize yourself with the upcoming discussion and lab prior to class each week. This includes reading the assigned articles and handouts about the upcoming labs.
- Usage of cellphones during discussion and lab is prohibited. Students that need to be asked to put cellphones away more than twice will be asked to leave class.
- Discussion sections will be graded heavily on active participation regarding the assigned reading.
- Assignments are due at the **START** of class. Failure to do both will result in a late penalty of 25% per day late.
- Spelling and grammar are considered when grading.

ACADEMIC MATTERS

Academic dishonesty of any sort will not be tolerated. Students should refer to **Hilltopics** for University policies and procedures regarding these instances. You are expected to abide by The University of Tennessee honor statement in all of your university activities.

"An essential feature of The University of Tennessee is a commitment to maintaining an atmosphere of intellectual integrity and academic honesty. As a student of the University, I pledge that I will neither knowingly give nor receive any inappropriate assistance in academic work, thus affirming my own personal commitment to honor and integrity." (Hilltopics, the UT Student Handbook)

Copying sentences, portions of sentences, or re-phrasing sentences in the same order as another student's will all be flagged as plagiarism by the University's plagiarism software. You may discuss your labs with other students, but write your lab work from your own thoughts. Your written work may be submitted through "SafeAssign" and plagiarism will not be tolerated.

It is expected that all students attending lab will conduct themselves in a manner that is both respectful and accommodating to their laboratory instructors and to their working lab partners/fellow students. Rude and disruptive behavior cannot be tolerated and will result in the dismissal of the student from the lab period and possibly the course.

Please place a copy of this syllabus in your lab notebook for reference throughout the semester.

Other course information

Tennessee Education Lottery Scholarship Recipients: All courses for which you are enrolled count toward your attempted hour total. You must receive approval from the Office of Financial Aid & Scholarships when withdrawing from UT or changing your enrollment status from full-time to part time in order to maintain good standing for the TELS program. Approvals are only issued for extraordinary circumstances, such as the death of an immediate family member, documented serious illness, or military mobilization. See Financial Aid website at: <http://web.utk.edu/~finaid>

Final exams: Finals are scheduled by the University Registrar during the university final exam period. There are no conflicting times. “Students are not required to take more than two written exams on any day. The instructor(s) of the last non-departmental exam(s) on that day must reschedule the student's exam during the exam period. It is the obligation of students with such conflicts to make appropriate arrangements with the instructor at least two weeks prior to the end of classes.” “All final exams must be given during the final exam period at the scheduled time.” (http://registrar.tennessee.edu/academic_calendar/finalexams.shtml)

Disability Services: If you need course adaptations or accommodations because of a documented disability, or if you have questions or concerns about disabilities or emergency information to share, please contact Disability Services: 2227 Dunford Hall; 974-6807; Email: ods@utk.edu; Website: <http://ods.utk.edu/>).

Counseling Center: <http://counselingcenter.utk.edu/>
1800 Volunteer Boulevard
865 974-2196, Email: counselingcenter@utk.edu

Academic Assistance:

Tutoring: The Division of Biology does not offer tutoring services. Contact the Student Success Center and the Academic Support Unit of The Office of Minority Student Affairs for information about tutoring opportunities.

- **Student Success Center:** The comprehensive source for information, services, and resources to assist your success at UT: <http://studentsuccess.utk.edu>
 - 812 Volunteer Boulevard, Greve Hall, room 324
 - 865 974-6641, Email: studentsuccess@utk.edu
- **Academic Support Unit of The Office of Minority Student Affairs** offers some tutoring services available to all students, but openings are limited and are filled quickly. The office offers other types academic assistance and support as well: <http://omsa.utk.edu/services/>

- 1800 Melrose Avenue, 865 974-6861, Email: omsa@utk.edu

Technical Assistance:

Blackboard, clickers, or general information technology assistance:

- Help Desk: 865 974 9900 (M – F, 8:00 – 5:00)
- OIT Walk-In Help Desk: Commons South, 2nd floor Hodges Library

OTHER RESOURCES FOR STUDENTS:

- One Stop: <http://onestop.utk.edu> (start here for any question you have)
- Undergraduate Catalogs: <http://catalog.utk.edu> (Listing of academic programs, courses, and policies)
- Hilltopics: <http://dos.utk.edu/hilltopics> (Campus and academic policies, procedures and standards of conduct)
- Course Timetable: https://bannerssb.utk.edu/kbanpr/bwckschd.p_disp_dyn_sched (Schedule of classes)
- Academic Planning: <http://www.utk.edu/advising> (Advising resources, course requirements, and major guides)
- Library: <http://www.lib.utk.edu> (Access to library resources, databases, course reserves, and services)
- Career Services: <http://career.utk.edu> (Career counseling and resources; HIRE-A-VOL job search system)
- Peer-reviewed literature: <https://webofknowledge.com/> (Web of Science); www.jstor.org/ (JSTOR). These websites can be accessed while on UTK internet OR by logging in with your NetID and password through <http://www.lib.utk.edu/databases/>