BIOL 260 GENERAL ECOLOGY **SPRING 2020**
University of Tennessee, Knoxville
Tuesday & Thursday 12:40–1:30pm, Strong Hall B1

Instructor
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Course Description
Ecology is the study of the interactions between organisms and with their environment. This course will give you an introduction to this discipline and expose you to the major questions asked and hypotheses tested in the main subdisciplines of ecology and the implications for nature conservancy and the balance coexistence between human and his environment. This includes an overview of population ecology, evolutionary ecology, community ecology, ecosystem ecology, landscape ecology, and conservation ecology. We will focus on key concepts but also understand the mechanisms underpinning ecological patterns in nature and how ecologists test these mechanisms. We will learn how to ask ecological research question, develop testable hypotheses, interpret data to uncover ecological patterns and processes.

Student Learning Outcomes
At the end of this class students will be able to:
a) understand major concepts and patterns in ecology
b) understand various physiological, anatomical and behavioral changes species develop to respond to their environment
c) gain mechanistic understanding of the processes that generate key ecological patterns at the population, community, ecosystem and landscape scales and how to study them.
d) develop testable hypotheses and design simple observational or experimental studies to investigate ecological patterns and identify their underlying processes.

Required textbook
WD Bowman, SD Hacker, ML Cain (2017) Ecology, 4th Edition. Sinauer Associates.
http://www.sinauer.com/ecology/
Students are encouraged to read the textbook chapter assigned for each session before coming to class and be ready to ask questions and participate in the discussions during the lecture.

Assessment
We will assess how your progress toward the student learning outcomes in this class using three exams, quizzes/homework, online Packback participation and extra credit that you can earn by attending the Department of Ecology and Evolutionary Biology (EEB) weekly seminar.

Exams: There will be three exams (two mid-terms and one final). Each exam will include critical thinking (short or long answer) questions, multiple choice questions, graph analysis and problem solving, developing hypotheses and designing field data collection scheme or manipulative experiments to test hypotheses.

Participation: We will use Packback for online discussion about the book, class materials, real life examples, and other relevant topics. **Each week, each student is required to ask one question and respond to 2 questions online to get participation grades**. You will receive an email invitation to join Packback and a short tutorial on critical questioning skills. Our class lookup key on Packback is: 50debcf3-9df1-44cf-a559-579b18c0fbf5.

Homework/Quiz: Weekly homework or quizzes will be given and will include data or graph analysis, and hypothesis testing or study design. There will be no make-up quiz. Homework will be due at the beginning of next class. **Assignments turned in after the due date will lose 25% of the points for every day (24h) with which it is late. Assignments that are 1hour late count as a day late.**

The Seminar Series (bonus points): EEB Departmental seminar takes place on most Fridays at 3:30pm in SERF 307. An ecologist is invited to talk to us about their body of work. This is an excellent opportunity for you to learn about different topics in ecology and to see how scientists convey their findings. **You can gain 2 bonus points for attending each seminar for a maximum of 5 seminar for the semester. To get bonus point for each seminar you attend, write a one-page summary of it and submit it via email to the TA Jacob Moutouama (jmoutoua@vols.utk.edu) within one week after the seminar.**

Grade component	Points	Grade %
Mid-terms exams	200	50%
Final exam	100	20%
Homework	100	20%
Online Participation via Packback	50	10%
Bonus from EEB seminars	(10)	
Total	460	100%

Final letter grades will be determined as: A = 93-100%; A- = 90-92%; B+ = 87-89%; B = 83-86%; B- = 80-82%; C+ = 77-79%; C = 73-76; C- = 70-72%; D+ = 67-69%; D = 63-66%; D- = 60-62%; F = <60%.

All work should be done independently; plagiarism software will be used to check written assignments for copying from classmates or other sources. **Plagiarism will result in a grade of zero and stiff penalties!!**

Academic integrity

Academic dishonesty of any sort will not be tolerated. ***Plagiarism*** *is using the intellectual property of someone else without giving proper credit. The undocumented use of someone else's words or ideas in any medium of communication (unless such information is recognized as common knowledge) is a serious offense, subject to disciplinary action that may include failure in a course and/or dismissal from the university.* Plagiarism includes the copying of phrases, portions of sentences or the main ideas from ANYONE (including a classmate) on ANY work submitted for a grade (exams, assignments, quizzes, etc). Academic dishonesty also includes assisting other students on quizzes or exams. You are expected to abide by The University of Tennessee honor statement in Biology and in all of your university activities as pledged in the honor code:

> ***"An essential feature of the University of Tennessee, Knoxville, 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."*** (*Undergraduate Catalog*)

Depending on the offence, penalties for academic dishonesty range from a minimum of a zero for the assignment, to an F for the course, to the filing of formal academic dishonesty charges seeking dismissal from The University of Tennessee. These choices are at the discretion of the instructor, and can occur in either the lecture or the lab portion of the class. You should be familiar with the requisites of academic honesty and what constitutes academic dishonesty as outlined in the UT Undergraduate Catalog (http://catalog.utk.edu/).

Biology Study Rooms: Hesler 417 is a quiet study room for majors in Biology; it can also be reserved for group study. Strong Hall 102 has a student resource center for printing, etc.

Technology
While in class, keep all electronic devices (especially smartphones) out of sight. Laptops is allowed in class to take notes. Particularly, access to social media sites is not allowed. **During exams and quizzes, any electronic device seen on your desk or within sight will result in a grade of zero**.

Classroom communication
Check the Canvas site (https://utk.instructure.com/) and your UTK e-mail frequently for announcements. Any readings, handouts and out-of-class assignments will be posted on Canvas. If you have a general question about the course, please post them to the course discussion board on Canvas to allow the questions to be answered once for everyone. For questions that are personal or specific to an individual, please contact the instructor via your UTK e-mail (spam filters may exclude other addresses). The instructor will respond to your email within 2 working days and may not return e-mails after hours or on the weekends or holidays.

Lecture schedule (***This schedule is tentative and subject to change!***)

Date	Lecture Schedule	Readings
9-Jan	The science of ecology	syllabus
14-Jan	Doing ecology	1
16-Jan	The physical environment	2,3
21-Jan	Coping with the environment I	4
23-Jan	Coping with the environment II	5
28-Jan	Evolutionary ecology I	6
30-Jan	Evolutionary ecology II	6
4-Feb	Life history	7
6-Feb	**Exam I**	
11-Feb	Populations	9
13-Feb	Population growth and dynamics	10,11
18-Feb	The community I – Nature of Communities	16
20-Feb	The community II – Change in Communities	17
25-Feb	The community III – Species diversity	19
27-Feb	Competition	14
3-Mar	Mutualism & Commensalism	15
5-Mar	Predation & Herbivory	12
10-Mar	Parasitism/Disease ecology	13
12-Mar	**Exam II**	
16-Mar	**NO CLASS – SPRING BREAK**	
20- Mar	**NO CLASS – SPRING BREAK**	
24-Mar	Indirect interactions	16
26-Mar	Biogeography	18
31-Mar	Production	20
2-Apr	Energy flow & food webs	21
7-Apr	Landscape ecology	24
9-Apr	**NO CLASS –**	
14-Apr	Global change ecology	25
16-Apr	Conservation biology	23
21-Apr	Summary	
28-Apr	**Final Exam: 2:45 -4:45pm**	

University Civility Statement

Civility is genuine respect and regard for others: politeness, consideration, tact, good manners, graciousness, cordiality, affability, amiability and courteousness. Civility enhances academic freedom and integrity, and is a prerequisite to the free exchange of ideas and knowledge in the learning community. Our community consists of students, faculty, staff, alumni, and campus visitors. Community members affect each other's well-being and have a shared interest in creating and sustaining an environment where all community members and their points of view are valued and respected. Affirming the value of each member of the university community, the campus asks that all its members adhere to the principles of civility and community adopted by the campus.

Disability Services

"Any student who feels s/he may need an accommodation based on the impact of a disability should contact Student Disability Services in Dunford Hall, at 865-974-6087, or by video relay at, 865-622-6566, to coordinate reasonable academic accommodations.

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; Volunteer Boulevard, Greve Hall, room 324. Phone: 865 974-6641

Technical Assistance

Canvas, clickers, or general information technology assistance:

- Help Desk: 865 974 9900 (M – F, 8:00 – 5:00) or online at http://help.utk.edu/
- OIT Walk-In Help Desk: Commons, 2nd floor Hodges Library
- Turning Technologies (clickers): 866 746 3015

Counseling and Wellness Center: College is a stressful time. If you are feeling significant levels of stress or anxiety that have led to mood changes, depression, loss of appetite, problems sleeping, or you have experienced a problem with relationships, family worries, loss, or a personal struggle, please seek help from the counseling center. Getting help is a smart and courageous thing to do for yourself and for those who care about you. The Student Counseling Center is the university's primary facility for personal counseling, psychotherapy, and psychological outreach and consultation services. Website: http://counselingcenter.utk.edu/. The Center for Health Education and Wellness is dedicated to a community model that is embodied in the "**VOLS HELP VOLS**" commitment: *We are all Volunteers. We look out for each other*. The Center manages **974-HELP**, the **distressed student protocol, case management, the Sexual Assault Response Team, and the Threat Assessment Task Force**. Website: http://wellness.utk.edu/

Emergency Alert System -- http://safety.utk.edu/

The University of Tennessee is committed to providing a safe environment to learn and work. When you are alerted to an emergency, please take appropriate action. Learn more about what to do in an emergency and sign up for UT Alerts. Check the emergency posters near exits and elevators for building specific information. In the event of an emergency, the course schedule and assignments may be subject to change. If changes to graded activities are required, reasonable adjustments will be made, and you will be responsible for meeting revised deadlines.