

EEB 330 Field Botany - 3 credits
University of Tennessee, Knoxville - Fall 2017

1

Lecture, Lab, & Field Trips: Tuesdays & Thursdays 12:40-3:25 in 304 Hesler Biology Building

Instructor:

Dr. Jessica M. Budke (pronunciation bud-key)
342 Hesler Hall - jbudke@utk.edu
Office Hours - Thurs 10-11am & Fri 11-12am*
*Rescheduled for 10-11am on Fri Aug 25th.
Other meetings by appointment.

Teaching Assistant:

Jayne Lampley
322 Hesler Hall - jlample5@vols.utk.edu
Office Hours by appointment (also available
on Tues & Thurs mornings in the classroom at
304 Hesler.)

Course Description: Principles of taxonomy, basic ecological concepts and identification, recognition, collection and preservation of local, native and naturalized plants.

Plants are foundational for life on our planet, from the air we breathe to the food we eat. Being able to identify plant species is critical for: spotting new plant species invading our native communities that if left unchecked may upset critical ecosystem services that we depend upon, discovering new plant species that could yield chemicals with novel pharmaceutical properties, and recognizing crop pests that can negatively impact our food security.

In this course students will explore a diversity of local plants of east TN, both under the microscope in the laboratory and outside in the field to learn the skills of plant identification. We will visit research facilities on campus, such as the UTK Herbarium, that are dedicated to the conservation, identification, and preservation of plants. As a team, students will use their knowledge gained during the course to create a field guide educating members of the public about plants and teaching them to distinguish common plant species.

Learning Objectives - What will you get from this course?

At the end of this course you will be able to:

- identify approximately 100 plant species on sight.
 - distinguish between approximately 20 major plant families on sight.
 - assess plant species using a field guide or dichotomous key.
 - use a hand lens and dissecting microscope to examine plant features.
 - compare and contrast the life cycles of major plant groups.
 - explain key differences between species to educate members of the public about plants.
 - recognize the common invasive plant species for eastern Tennessee.
 - evaluate plants you have never seen before to determine the scientific name and family.
-

Course website: Course information will be posted online through **CANVAS**.

Communication: Please use your UTK email address, so that your message isn't lost in the SPAM filters. Email replies within 24 hours, except for weekends and university holidays.
Everyone needs a break from the grind now and again.

EEB 330 Field Botany - 3 credits
University of Tennessee, Knoxville - Fall 2017

2

Required books and supplies - Having these for class will set you up for success!

Textbook: Guide to the Vascular Plants of Tennessee (ISBN: 978-1621901006)

Field trips:

- **Field Notebook** (something that you can write and draw in while standing) + **Pen/Pencil**
- **Hand Lens (10X)**, also called a Loupe. Available many places online.
Recommend having it on a string or lanyard, so it is less likely to be lost.
- **We all must wear closed toed shoes and long pants.**
We may encounter ticks, chiggers, poison ivy, stinging nettles, mud, or slippery rocks.
- **Dress for the weather so you will be comfortable.** (Ex. Hat, sunglasses, jacket, or rain gear.)
- **Bring along water, bug spray, sunscreen, and a snack.**
Being thirsty, hungry, bitten, or burned is no fun.

What you can expect from me:

- To start and end class on time.
- To come to class prepared to lead the learning process.
- To treat all students with courtesy and respect.
- To be open to constructive input from students in the course.
- To ensure that opportunities to participate are enjoyed equally by all students in the course.
- To be available during office hours and via email.
- To give quizzes and exams that accurately reflect the material covered in class.

What I expect from you:

- To come to class on time, and refrain from packing up belongings before class ends.
 - To come prepared to learn and participate with your books and field supplies ready.
 - To be attentive and engaged with the course material during lecture, lab, and the field.
 - To give full respectful attention while either instructor, TA, or another student is speaking.
 - To use courteous language and keep comments/questions relevant to the topic at hand.
 - To seek help from the instructor, teaching assistant, and university resources when needed.
-

Technology (ex. cell phones, laptops, tablets, headphones, music players):

As research on learning shows, unexpected noises and movement automatically divert and capture people's attention, which means you are affecting everyone's learning experience if your technology makes noise or is visually distracting during class. Research also shows that you will retain more material if you take notes by hand.

- I ask you to silence all your technology during class. When the TA or instructor are lecturing, all technology should be put away. I ask that you do not record any lectures by the instructor or teaching assistant without written consent.
- We have new technology enhanced microscopes. I expect you to take good care of them, so that other students can benefit from them for years to come. Technology may be used during lab to interact with microscopes, take images of the plants, or for other work related to the course.
- Technology may not be used during any quiz or exam. Having any technology out (on your desk or in sight) during a quiz or exam will result in a grade of zero.

EEB 330 Field Botany - 3 credits
University of Tennessee, Knoxville - Fall 2017

Date	Day T<u>u</u>esdays & Thu<u>R</u>sdays	Bonanza of Botanical Experiences <i>Sept 1 - Last day to drop without a "W"; Nov. 14 - Last Day to Drop with a "W" (WP/WF); Dec. 5 - Last Day for a University Withdrawal</i>
24 Aug	R	Leaves, Flowers
29 Aug	T	How to use Keys / Field Guides; Plant families
31 Aug	R	In the lab - Keying/Families
05 Sept	T	In the lab - Keying/Families
07 Sept	R	Off Campus Field Trip Forks of the River, 35.954028, -83.858817
12 Sept	T	Off Campus Field Trip Melton Hill Greenway, 36.019805, -84.166962
14 Sept	R	In the lab - Keying/Families
19 Sept	T	In the lab - Keying/Families
21 Sept	R	EXAM 1
26 Sept	T	Off Campus Field Trip Turkey Creek Wetland - 326 Lovell Rd, Knoxville, TN 37934
28 Sept	R	In the lab - Keying/Families
03 Oct	T	Off Campus Field Trip Ijams Quarry, 35.952058, -83.865605
05 Oct	R	Fall Break
10 Oct	T	In the lab - Keying/Families, Inflorescences, Fruits
12 Oct	R	On Campus Field Trip Ag Campus, UT Gardens **Meet at the garden entrance on Jacob Drive.**
17 Oct	T	In the lab - Keying/Families, Grasses, Sedges
19 Oct	R	On Campus Field Trip Herbarium **Meet at Temple Hall, 1st floor.**
24 Oct	T	WeDigBio exercise & Review for Exam 2
26 Oct	R	EXAM 2
31 Oct	T	Off Campus Field Trip John Bird's Wetland, 36.042499, -84.185526
02 Nov	R	In the lab - Keying/Families, Gymnosperms - Life Cycle
07 Nov	T	Off Campus Field Trip Dean's Woods, 35.921203, -83.947871
09 Nov	R	In the lab - Keying/Families, Ferns - Life Cycle
14 Nov	T	In the lab - Keying/Families, Bryophytes - Life Cycle
16 Nov	R	<i>Project work day & Review for Exam 3</i>
21 Nov	T	EXAM 3
23 Nov	R	Thanksgiving BREAK
28 Nov	T	<i>Project work day</i>
30 Nov	R	<i>Project work day</i>
05 Dec	T	<i>Project work day</i>
12 Dec	T	Final Presentation of Projects 10:15 a.m. – 12:15 p.m.

****This schedule is tentative and subject to change, including field trip destinations!****

Disability Services:

"Any student who feels they 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." This includes the need to record lectures during class.

EEB 330 Botany - 3 credits
University of Tennessee, Knoxville - Fall 2017

Attendance: This is a hands-on, field based course that uses live plant materials, which do not keep from week to week. You are expected to attend all class meeting times to have full access to the plant materials and the best opportunity for successful learning in this course.

Everyone must attend a minimum 6 of the 8 Off/On Campus Field Trips, and 13 of the 17 in-class meeting days in order to pass this course.

If you know that you will be absent please let the instructor know ASAP. You will be responsible for all material missed. Lecture notes will be available from the instructor for you to copy by hand. Images of the lab material may also be available from the TA.

Assessment of your learning - Breakdown of Points:

Quizzes	100 points
Participation	100 points
Exam 1	100 points
Exam 2	100 points
Exam 3	100 points
Project	100 points
TOTAL	600 points

To accommodate the lack of makeup quizzes, everyone's two lowest quiz scores can be dropped when calculating final grades for the class.

Everyone must complete a minimum of 450 graded points in order to pass this course.

Quiz / Exam Policies:

- No make-ups will be given for quizzes or exams.
 - In cases of documented emergencies or documented illnesses grading may be adjusted for missed quizzes, or exams. Please notify the instructor immediately to discuss.
- All exam dates are listed on the syllabus above. All quizzes may be unannounced or announced and may cover material from any previous class sessions. Quizzes may also be held during field trips.

Final letter grades will be determined by the total percentage of 600 points accumulated as follows:

A	93 – 100%	B-	80 – 82%	D+	67 – 69%
A-	90 – 92%	C+	77 – 79%	D	63 – 66%
B+	87 – 89%	C	73 – 76%	D-	60 – 62%
B	83 – 86%	C-	70 – 72%	F	<60%

Writing as Professionalism Projects - Science Communication to the Public

Communicating to broad audiences is a critical skill for all scientists to develop and we can acquire skills like this through practice. As a team, students will use their botanical knowledge to create a field guide intended to educate members of the public about plants and teaching them to distinguish common plant species. The focus of the field guide will be directed by your own interests and botanical passions.

Project assessments - Teams will give a brief presentation sharing their field guide with the entire class. This project will be evaluated by your colleagues in the class, as well as members of the public.

As part of the projects, you will be required to submit peer evaluations for each of your team members. Their primary purpose is to provide you with valuable, constructive feedback about how you work within a team. Regardless of your future career, working in a team is a valuable skill that you will use throughout your life. These evaluations will also be factored into your project grade.

Additional information on the projects will be provided during the week of Oct 31st.