

**Biology 115: Introductory Plant Biology Laboratory**

The University of Tennessee, Spring 2018

2 credits: 1 credit lab, 1 credit discussion

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**Catalog Description:** Laboratory work will analyze plant structure, morphology, and function, with an emphasis on methods for observation, identification, and data collection. The discussion will focus on agricultural priority areas of the future: sustainable bioenergy, climate change, food safety, and food security.

Satisfies General Education Requirement: (NS with lab) if taken with Biology 113 or 114.

Contact Hour Distribution: 1 hour discussion and one 2-hour lab.

Recommended Background: 113 or 114 or equivalent.

**Lab/Discussion:** One 3-hour lab or one 3-hour discussion per week; 204 Hesler Biology Building  
Section 001- Tuesdays 12:20-3:20 PM, Section 002- Tuesdays 3:35-6:35 PM

**Instructor**

Jayne Lampley

322 Hesler Biology Building

[jlample5@vols.utk.edu](mailto:jlample5@vols.utk.edu)

865-974-8362

Office Hours: Thursdays 10:00 – 11:00 AM

**Lab Assistant**

Harmony Yomai

318 Hesler Biology Building

[vyomai@vols.utk.edu](mailto:vyomai@vols.utk.edu)

**Course Learning Objectives:**

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

- 1) Investigation and description of basic plant, algal, and fungal structure, function, evolution, and ecology
- 2) Use of scientific equipment and methods to examine and identify plants
- 3) Analysis, interpretation, and communication scientific results by various means
- 4) Explanation of how plants, algae, and fungi relate to the USDA priority areas of sustainable bioenergy, climate change, food safety, nutrition, and food security
- 5) Reading and interpretation of scientific literature related to plants, algae, and fungi

**Support for Learning**

**Texts and Materials:**

- *Biology 115 Laboratory Activity Instruction Packets*. To be provided by instructors electronically on Canvas. **Students must print and read each week before class! (Required)**
- Raven, P., Evert, R., & Eichhorn, S. (2013) *Biology of Plants*. Eighth Edition W. H. Freeman & Co., New York, NY, 727 pp. **Reading assignments are to be completed each week before class! (Required)**
  - It is acceptable to purchase the Seventh Edition of the textbook for this course, as there are only minor differences in content, but a large difference in cost. However, the page and figure numbers differ slightly between editions and it is the student's responsibility to make sure they study the correct material.

- Selected Publications from primary peer reviewed journals emphasizing the field of botany. To be available on Canvas. **Students must print and read each week before class! (Required)**
- Course Syllabus. Note that the syllabus is subject to change as needed throughout the semester and it is the student's responsibility to remain informed of any changes. **(Required)**
- Laboratory Materials: Notebook & drawing pencils. Some students may wish to bring personal materials for dissections: fine-pointed forceps, scissors/razors, or cameras and colored pencils to make their own pictures of organisms. **(Strongly Recommended)**

**Course website:**

<http://online.utk.edu/> (Canvas).

**Study Rooms:**

417 Hesler is a quiet study room for majors in Biology. It can also be reserved for group study.

**Communications:**

- If you cannot make office hours, please use your UTK e-mail (spam filters may exclude other addresses) to schedule a meeting.
- Please allow up to 48 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.

**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.**

**Lab Safety:**

- 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.
- No open-toed shoes can be worn during lab. **You will not be allowed to stay in the laboratory if you have improper shoes!**

**Lab Rules:**

- You must clean and dispose of all laboratory materials as directed by your instructor before leaving lab. Leave the lab better looking than it did when you arrived.
- There will be no cell phone calls or texts in the lab at any time.
- Punctuality is a must. Interruption of the instructor and class members due to late arrivals is not acceptable. Lab/discussion lasts for 3-hours; you should expect to be there for the full three hours each week.

**Lab Participation:**

- **Class attendance is mandatory** – if you miss a class, you miss the points associated with that class. If you need to miss class due to a University-sponsored activity, you must notify your instructor at least 1 week prior to class, however there is no way to make up a lab exercise.
- **Prepare for the upcoming lab prior to attending each week** – this includes reading the lab packets for the upcoming labs, as well as all assigned readings. Print out any required materials before coming to lab! The instructor will expect to see notes on the reading materials at the start of class.
- Assignments must be handed in as requested at the beginning of class. This may include submitting the assignment through the university's plagiarism detection software. Any assignment turned in after the stated due date and time will be subject to a late penalty of 25% per day late.

- Spelling, grammar, and formatting will be considered when grading.
- **Exams and Quizzes will be given at the beginning of lab** – if you are late and miss the quiz, you miss the points. There are no make-up quizzes unless you have an excused absence with written notice.  
 \*Note that lab participation, i.e., coming prepared with materials, completed reading assignments with notes/questions for class, etc. may affect your final grade!

#### 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 (this is encouraged), but write your lab work from your own thoughts. Your lab communications and presentations will 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.

#### Grading Policies

##### Assessment of Learning (Point Earning Opportunities!)

Quizzes (4) .....	<b>60</b>	points
Written & Oral Lab Communications (2) .....	<b>100</b>	points
Final Experiment Proposal & Presentation .....	<b>50</b>	points
Class Participation .....	<b>65</b>	points
Exams (2).....	<b>200</b>	points
		Total <b>475</b> points

#### Final Grades

Final letter grades will be determined by the total percentage of 475 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%

**Other Information:**

**Dean of Students:**

- <http://dos.utk.edu/>

**Disability Services:** If you need course adaptations or accommodations because of a documented disability, please contact me privately to discuss your needs. If you have questions or concerns about disabilities or emergency information to share, please contact Disability Services: 100 Dunford Hall; 974-6807 or 865-622-6566 for video phone; Email: [ods@utk.edu](mailto:ods@utk.edu); Website: <http://ods.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](mailto:studentsuccess@utk.edu)

**Counseling Center:**

- <http://counselingcenter.utk.edu/>
- 1800 Volunteer Boulevard
- 865 974-2196, Email: [counselingcenter@utk.edu](mailto:counselingcenter@utk.edu)

**Other Resources for Students:**

- One Stop: <http://onestop.utk.edu> (Hodges Library, Ground Floor, 8a-5p M-F)
- Undergraduate Catalogs: <http://catalog.utk.edu> (Listing of academic programs, courses, and policies)
- Hilltopics: <http://hilltopics.utk.edu> (Campus and academic policies, procedures and standards of conduct)
- Course Timetable: [https://bannersb.utk.edu/kbanpr/bwckschd.p\\_disp\\_dyn\\_sched](https://bannersb.utk.edu/kbanpr/bwckschd.p_disp_dyn_sched) (Schedule of classes)
- Academic Planning: <http://www.utk.edu/advising> (Advising resources, course requirements, major guides)
- Library: <http://www.lib.utk.edu> (Access to library resources, databases, course reserves, and services)
- Center for Career Development: <http://career.utk.edu> (Career counseling and resources; HIRE-A-VOL job search system)

**Course Schedule**

Week	Date	Lab Topic(s)	Discussion Topic(s)	Assignments Due (PRIOR to lab)
0	9 Jan	No lab - classes begin 10 January		None
1	16 Jan	Lab 1	Introduction to grand challenges (USDA Article)	<b>Reading:</b> None
2	23 Jan	Lab 2	Grand challenges continued; intro to oral communication	<b>Reading:</b> Textbook and Article <b>Other:</b> Practice Oral Communication worksheet
3	30 Jan	<b>Quiz 1</b> *Meet at Hodges Library*	Searching for, reading, and citing scientific literature, formulating hypotheses, reading graphs/figures	<b>Reading:</b> Article <b>Other:</b> Prepare for Quiz 1
4	6 Feb	Lab 3	Intro to statistics and t-tests, experimental design	<b>Reading:</b> Text and Article
5	13 Feb	Lab 4 Set up Hormone Project	Refining experimental design	<b>Reading:</b> Textbook
6	20 Feb	<b>Quiz 2</b> Lab 5	[Grand challenge I] Data Collection	<b>Reading:</b> Text and Article <b>Other:</b> Prepare for Quiz 2
7	27 Feb	Lab 6	[Grand challenge II] Peer review & presentation	<b>Reading:</b> Text and Article <b>Other:</b> Presentation, Draft of Hormone Lab Communication
8	6 Mar	<b>Mid-term Exam</b>		<b>Study for Exam!</b>
9	13 Mar	<b>Spring Break</b>		
10	20 Mar	Lab 7 *Herbarium visit*	Natural history collections	<b>Reading:</b> Text and Article <b>Other:</b> Final hormone lab communication due
11	27 Mar	<b>Quiz 3</b> Lab 8 Collect and analyze bryophyte data	Experimental design of bryophyte project	<b>Reading:</b> Textbook <b>Other:</b> Prepare for Quiz 3
12	3 Apr	Lab 9	[Grand challenge III] Final experiment proposal	<b>Reading:</b> Text and Article <b>Other:</b> Bryophyte project lab communication draft due
13	10 Apr	<b>Quiz 4</b> Lab 10 *Greenhouse visit*	Peer review & bryophyte presentation	<b>Reading:</b> Textbook <b>Other:</b> Prepare for Quiz 4

14	17 Apr	Lab 11 *Campus Tree Walk*	[Grand challenge IV]	<b>Reading:</b> Text and Article <b>Other:</b> Final Experiment Proposal Draft Due
15	24 Apr	<b>Final Experiment Proposal Presentations, Lab Communication, &amp; Peer Review</b>		
16	3 May	<b>Final Exam (Section 001 12:30 – 2:30 PM; Section 002 5:00 – 7:00 PM)</b>		

**This schedule is tentative and subject to change!**

**University Deadlines (as of 9 January 2018):**

*16 Jan - Last day to drop without a "W"; 23 Jan – Adjust hours for financial aid*

*3 Apr - Last Day to Drop with a "W" (WP/WF); 27 Apr - Last Day for a University Withdrawal*