BIO 374 & 174L; 387J & 187L Plant Anatomy Spring 2020

Unique Numbers: 48570, 48684, 48575, 48683

Meeting Time & Place: TR 11 am – 1 pm, BIO 108

Instructor: Dr. E. Jane Bradbury, Ph.D.

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Office: PAI 1.48 B

Office Hours: Tuesday 9:30 – 10:30 BIO 108; By appt.

Open Lab: Friday 9:30 – 10:30 BIO 108

Course Description:

Plant Anatomy is an integrative study of how the fundamental biological concept of form-fits-function is expressed in the plant body throughout the evolutionary history of Plantae. Topics covered will include a basic overview of the evolution of land plants, followed by a more in-depth study of Angiosperm organs, tissues, and cell types. Morphology and physiology will often be taught in tandem to help students conceptually integrate organismal structure and function. The course will be approximately two-thirds (2/3) lecture, one-third (1/3) laboratory study. Laboratory exercises will give students experiential learning opportunities for lecture material, but also provide training in compound light microscopy and tissue and slide preparation.

This course may be used to fulfill **three** hours of biological sciences elective credit and **one hour** of the biological sciences laboratory requirement, and/or three hours towards the plant biology requirement for B.S. degrees in Biology, Environmental Science, and Plant Biology. Plant Anatomy may also be taken as a graduate student, in which case graduate students will have one additional laboratory project.

Core Objectives:

By the end of this course, students should be able to:

1) Compare and contrast the major evolutionary trends in plant anatomy.

2) Differentiate the cell and tissue types found in the leaf, stem, root, and flower of Angiosperms;

3) Integrate plant structures with plant development, physiological function, and environmental selection.

4) Employ a compound light microscope and associated slide preparation techniques to analyze plant tissues.

Required Materials:

- Student subscription to TopHat, online interactive classroom platform.
- Bradbury, E. J. *Plant Form and Function.* Available on TopHat.
- Bound composition notebook for laboratory notebook

Grading Policy:

BIO 374 & 174L: Undergraduate Students

Assessment	Points Earned
2 lecture exams (100 points ea.)	200
1 laboratory practical exam	50
Lecture & Discussion Activities	50
Laboratory Notebook	100
Combined Final	150
Total	**550**

BIO 387J & 187L: Graduate Students

Assessment	Points Earned
2 lecture exams (100 points ea.)	200
1 laboratory practical exam	50
Lecture & Discussion Activities	100
Laboratory Notebook	50
Combined Final	150
Independent Laboratory Project	50
Total	**600**

Official University Grading Scale:

Percentage	Letter Grade
93.5% and above	A
90% - 93.49%	A-
86.5% - 89.99%	B+
83.5% - 86.49%	B
80% - 83.49%	B-
76.5% - 79.99%	C+
73.5% - 76.49%	C
70% - 73.49%	C-
66.5% - 69.99%	D+
63.5% - 66.49%	D
60% - 63.49%	D-
59.99% and below	F

Re-Grade Policy: After each assignment, you should review your responses, both to learn from your errors and to double-check for accuracy. Should you find a grading decision with which you disagree, you must submit **to Dr. Bradbury** a **written justification of your answer** no later than **one week from the time the assignment was returned.**

Teaching & Learning Philosophy:
An important part of succeeding in this course is understanding the underlying philosophy behind my teaching strategies. Education should be valued for its ability to grow and strengthen the mind. I expect you to be engaging in this course because you desire to improve yourself and your cognitive abilities. This attitude carries with it an implicit sense of self-responsibility for one's own learning. I am not here to *teach you* as much as I am here to *help you learn*. I always do my best to craft my courses to provide a diverse set of learning opportunities. One tool available to you will be the traditional lecture. However, just as much of the course content will be communicated with readings and other exercises. Similarly, there is an entire body of literature that would be impossible to formally include in the course but which I encourage you to explore in your quest for understanding specific facets of course content. I cannot tell you "everything you need to know"—that's not how true learning works. However, I am committed to providing you with the best possible learning environment to expand your understanding of the science and systems of life!

Expectations on Class Attendance and Courtesy: Though I do not include a formal attendance grade contribution to your final grade, you are expected to attend class and there will be unannounced, intermittent point-carrying assignments or activities that occur in lecture and discussion. Additionally, I most certainly expect you to conduct yourself like a polite adult at all times in my classes. Disruptive behavior, as determined solely and subjectively by me, the professor, or whomever is leading the class at that time, can result in your removal from the lecture or discussion section that day and removal of any points earned for that day.

University Policies:

Religious holy days: A student who misses classes or other required activities, including examinations, for the observance of a religious holy day should inform the instructor as far in advance of the absence as possible, so that arrangements can be made to complete an assignment within a reasonable time after the absence.

Students with Disabilities: Please notify your instructor of any modification/adaptation you may require to accommodate a disability-related need. You may find out more information on the Services for Students with Disabilities website: http://diversity.utexas.edu/disability/ and/or http://diversity.utexas.edu/disability/how-to-register-with-ssd/

Policy on Scholastic Dishonesty: Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and/or dismissal from the University. Policies on scholastic dishonesty will be strictly enforced. For further information, please visit http://deanofstudents.utexas.edu/conduct/.

Use of E-mail for Official Correspondence to Students: All students should be familiar with the University's official e-mail student notification policy. It is the student's responsibility to keep the University informed as to changes in his or her e-mail address. Students are expected to check e-mail on a frequent and regular basis in order to stay current with University-related communications, recognizing that certain communications may be time-critical. Instructions for updating your e-mail address are available at http://www.utexas.edu/its/policies/emailnotify.html.

University of Texas Honor Code: "As A Student Of The University Of Texas At Austin, I Shall Abide By The Core Values Of The University And Uphold Academic Integrity."