

COURSE SYLLABUS
FORS 240—Tree Biology—Fall 2016
2 Credits

Course Information

Instructor: Edwin Burke
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Course Schedule:
Lecture: Wednesday 10:00-11:50, Forestry Bldg., Room 301 (Plant Lab)
Texts: Forestry 240 Tree Biology Course Pack available from Burke at 1st meeting

Course Schedule

Week	TOPIC
Short Week	No Wednesday Classes This Week
2	Introduction; Overview of Tree Biology Course & what we will be covering; Introduction to the plant cell types and functions
3	Plant cell types and functions (cont.); 1° and 2° cell wall chemical components; growth and structure of 1° and 2° walls
4	Apical meristems and primary meristems; role of growth promoting and inhibiting hormones development of the woody aerial stem and twig morphology;
5	Examination over cell walls, apical meristems, primary growth, developing aerial stems and twigs
6	Leaf structure and photosynthesis
7	Leaf structure and photosynthesis (cont.)
9	Gymnosperm sexual reproduction; male and female structures, pollination, fertilization, seed development and germination; Angiosperm sexual reproduction; flower structure, pollination, double fertilization, zygote development; fruit types, seed development and germination
10	Examination over Leaves, Gymnosperm and Angiosperm sexual reproduction; Friday is last drop day
11	Root development, anatomy/morphology and function
12	Vascular cambium ontogeny, function and periodicity. Secondary xylem and phloem morphology, lateral growth, sap content and flow.
13	Thanksgiving Break—Wednesday through Sunday
14	Secondary xylem; wood's role in stem strength and characteristics of interest for utilization in various products
15	Secondary xylem gross and microscopic structure; plant identification using secondary xylem
16	FINALS WEEK- Examination over Leaves, Gymnosperm and Angiosperm roots, vascular cambium and secondary phloem and xylem

Lectures will be delivered via whiteboard diagrams, live microscope images of prepared slides, video recordings of process explanation and PowerPoint slide presentations. Questions will be welcomed at any point in the lecture.

Examinations will consist of preparing labelled diagrams of stem, root, leaf and flower structures, life cycles and processes. The ability to define terms and a good understanding of the angiosperm and gymnosperm life cycles is also necessary. A look at the scope of the course will tell you what we will be doing this semester, and staying up with the material should be a priority.

An extensive chemistry background is not necessary, nor is a course in either plant physiology or plant anatomy. For you to have taken a fundamental biology class that covered mitosis/meiosis, basic plant structure and anatomy is a definite plus. For those lacking this background, I will be glad to bring you along collectively with the class or individually. A review of a basic botany textbook, available in the library or on-line sources, will also help as we move through the material.

It is my desire to present this class in a way that it is an enjoyable challenge. I love teaching people about trees. Research and “real-world” experience is the foundation of the information and techniques you will be presented with, and you should use and learn from them. The goal is to present the fundamental structure and function of the different systems of the tree, coupled with my experience in working with these systems in a variety of settings, to provide the foundation for decision making in forest management settings. It is my sincere intent to make the challenge of this course purposeful for you this semester and in the years ahead. I look forward to this semester with you!

Course grading will be as follows:

2	2-hour lecture exams @ 150 pts. each	300
1	2-hour Final Exam @ 150 pts.	<u>150</u>
	Total Points for the Course	450

Approximate grading scale will be:

A = 90.0-100%; **B** = 80.0-89.9%; **C** =70.0-79.9%; **D** = 60.0-69.9%; **F** < 60.0%

- **All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University.**
- **All students need to be familiar with the Student Conduct Code. The Code is available for review online at http://life.umt.edu/vpsa/student_conduct.php.**

Important Dates Restricting Opportunities to Drop Course Autumn 2017:

Days into Semester	Opportunities	Drop Dates
To 15 th instructional day	Students can drop classes on CyberBear with refund	Sept 13 = last day
16 th to 45 th instructional day	Drop requires form with instructor and advisor signature, a \$10 fee from registrar's office; student will receive a 'W' on transcript, no refund.	September 14 through October 31, 2016
Beginning 46 th instructional day	Students are only allowed to drop a class under very limited and unusual circumstances. Not doing well in the class, deciding you are concerned about how the class grade might affect your GPA, deciding you did not want to take the class after all, and similar reasons are not among those limited and unusual circumstances. If you want to drop the class for these sorts of reasons, make sure you do so by the end of the 45 th instructional day of the semester.	November 1 – December 12

Class Attendance Policy

- Students who are registered for a course but do not attend the first two class meetings may be required to drop this course. This rule allows for early identification of class vacancies to permit other students to add classes. Students not allowed to remain must complete a drop form or drop the course on the Internet: [CyberBear](#).
- Students are expected to attend all class meetings and complete all assignments for this course. Student may be excused for brief and occasional absences for reasons of illness, injury, family emergency, religious observance or participation in a University sponsored activity. (University sponsored activities include for example, field trips, ASUM service, music or drama performances, and intercollegiate athletics.) Students shall be excused for military service or mandatory public service.
- Students incurring an excused absence will be allowed to make up missed work when done in a manner consistent with the educational goals of this course.
- Students expecting to incur excused absences should consult with the instructor early in the term to be sure that they understand the absence policies for this course.