

Tree Biology - FOR 3342C – Section 2533 - Spring 2018 Syllabus

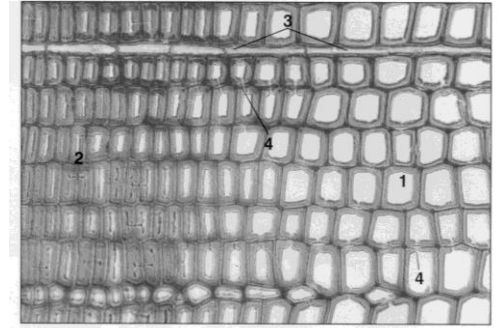
Instructor: Dr. Tim Martin (359 N-Z, 846-0866, tamartin@ufl.edu)

Office Hours: Before class on Wednesdays or by appt.; Otherwise, open door policy - If my office door is open and I'm not meeting with someone else, please feel free to drop in. I also check e-mail frequently.

Course web resources: UF Canvas Site

Lectures: Wednesday, Periods 2-3 (8:30 a.m. – 10:25 a.m.), 219 Newins-Ziegler Hall

Lab: Friday, 9:15 a.m. – 11:30 a.m., 219 N-Z



Cross-sectional view of a conifer stem showing earlywood (1) and latewood (2) tracheids, a ray (3) and inter-tracheid pits (4). Magnified 275 X. (Bowes 1996)

Objectives: Trees are complex biological systems. Resource managers who understand the biology of trees are better able to predict and control how forests respond to management. After completing this course, students will understand basic tree structure and function, how tree biology determines and constrains what managers can accomplish with forests, and how both human and environmental factors impact the biology of trees.

Supplemental Text (not required) : Pallardy, S.G. 2007. *Physiology of Woody Plants*, Third Edition. Academic Press, San Diego. 480 p. NOT Available at University Bookstore. You may purchase this text online from vendors such as Amazon.com. The Second Edition can probably also be obtained online new or used, and would be an acceptable reference, as well.

Lecture Outlines: Lecture outlines will be handed out at the beginning of each lecture. Lecture outlines will also be available for downloading from the course web site, usually by the evening before each lecture.

Evaluations and Expectations

Exams: There will be two non-comprehensive exams during the semester, and a final exam administered on the last day of class. Please plan ahead to attend all exams. *Make-up exams will be given only under extreme circumstances.*

Lab reports: A hard copy lab report will be due for each laboratory exercise, usually handed in at the start of the following week's lab (see lecture schedule for exact due dates). *No late or e-mailed lab reports will be accepted.* The lowest lab report score will be dropped when calculating final grades.

Quizzes: Approximately 10 quizzes will be given covering information from recent lectures. The quizzes will be given at the beginning of class on Friday, and will cover material from that week's lecture. *Quizzes will not be distributed to late-arriving students, so please make every effort to arrive on time. Make-up quizzes will be given only under extreme circumstances.*

Attendance: Please make an effort to attend and arrive promptly for all class meetings. If you must miss a lecture, you may download the handout from the course Canvas site or copy a colleague's notes.

Classroom Atmosphere: I strive to develop an atmosphere of mutual courtesy and respect in class, so that everyone is comfortable and free to learn. Please help me in this effort by refraining from distracting activities in class like reading the newspaper, using electronics including phones, and having side conversations.

Plagiarism: Using another's work or writing without giving credit is one definition of plagiarism. Plagiarism is a serious offense and will be dealt with harshly. If you have any questions about plagiarism, feel free to ask the instructor.

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Assignments, quizzes and exams Summary Table

Assignment	Total number	% of total course points each	% of total course points
Non-Comprehensive Exams	2	15	30
Final Exam	1	30	30
Lab Reports	5	6	30
	(drop lowest score)		
Quizzes	10	1	10

Final grades will be assigned as: 96.7-100 A+, 93.4-96.6 A, 90-93.3% A-, 86.7-90 B+, 83.4-86.6 B, 80-83.3% B-, 76.7-80 C+, 73.4-76.6 C, 70-73.3% C-, 66.7-70 D+, 63.4-66.6 D, 60-63.3% D-, < 60% E

UNIVERSITY OF FLORIDA POLICIES YOU NEED TO KNOW:

Online Course Evaluation Process

Student assessment of instruction is an important part of efforts to improve teaching and learning. At the end of the semester, students are expected to provide feedback on the quality of instruction in this course using a standard set of university and college criteria. These evaluations are conducted online at <https://evaluations.ufl.edu>. Evaluations are typically open for students to complete during the last two or three weeks of the semester; students will be notified of the specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results>.

Academic Honesty

As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: *"We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity."* You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: *"On my honor, I have neither given nor received unauthorized aid in doing this assignment."*

It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: <http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code>.

Software Use:

All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

Services for Students with Disabilities

The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation

0001 Reid Hall, 352-392-8565, www.dso.ufl.edu/drc/

Campus Helping Resources

Students experiencing crises or personal problems that interfere with their general well-being are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

- *University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575, www.counseling.ufl.edu/cwc/*
Counseling Services
Groups and Workshops
Outreach and Consultation
Self-Help Library
Wellness Coaching
- *Career Resource Center, First Floor JWRU, 392-1601, www.crc.ufl.edu/*



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Date	Lecture Wednesday Period 2-3 (8:30-10:25) 219 Newins-Ziegler Hall	Date	Lab Friday Periods 2-4 (9:15 – 11:30) NOTE 9:15 START 219 Newins-Ziegler Hall
Jan 10	Course Introduction; Syllabus; Woody plant structure lecture	Jan 12	Introduction to labs and How to write a lab report
Jan 17	Primary growth	Jan 19	Quiz Lab Exercise: Vegetative shoot development <i>Writeup Due January 26</i>
Jan 24	Secondary growth and wood development	Jan 26	Quiz Lab Exercise: Lumber biology: stem anatomy <i>Writeup Due February 2</i>
Jan 31	Photosynthesis - Biochemistry	Feb 2	Quiz Lab Exercise: Measuring photosynthesis and respiration <i>Writeup Due February 9</i>
Feb 7	Photosynthesis - Biological and environmental controls	Feb 9	Quiz Carbohydrates, respiration
Feb 14	Mineral nutrition and nutrient cycling	Feb 16	Exam 1 (Structure through Carbohydrates and Respiration)
Feb 21	Water relations I: water potential; uptake, transport and loss of water	Feb 23	Quiz Water relations I (cont.)
Feb 28	Water relations II: Control of transpiration; tree and stand water balance	Mar 2	Quiz Lab Exercise: Water potential <i>Writeup Due March 16</i>
Mar 7	No Class – UF Spring Break	Mar 9	No Class – UF Spring Break
Mar 14	Water relations III: Water stress and xylem cavitation	Mar 16	Quiz Energy balance
Mar 21	Energy balance Exam review	Mar 23	No Class – Forestry Club Conclave
Mar 28	Exam 2 (Mineral Nutrition through Energy Balance)	Mar 30	Radiation effects on tree morphology and physiology – ONLINE LECTURE – view on Canvas lecture page
Apr 4	Reproductive biology	April 6	Quiz Lab Exercise: Reproductive biology <i>Writeup Due April 7</i>
Apr 11	Genetics of forest trees	Apr 13	Quiz Field Trip: Tree improvement MEET AT NEWINS ZIEGLER AT 8:30
Apr 18	Tree improvement	Apr 20	Quiz Review for Final Exam
Apr 25	In-Class FINAL EXAM		
Wednesday, April 25, In-Class Final Exam 8:30 a.m. – 10:25 a.m. 219 Newins-Ziegler Hall			



Abies amabilis - Pacific silver fir