

Tree Biology - FOR 3342C - Section 2533 - Spring 2009 Syllabus

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

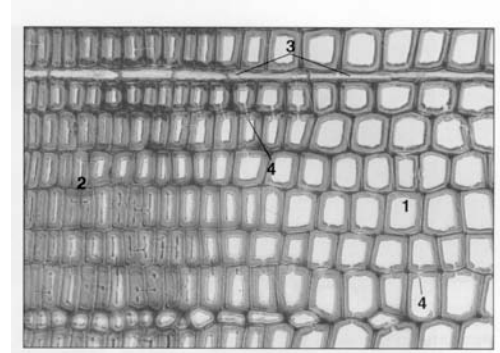
Teaching Assistant: Patricio Munoz, p.munoz@ufl.edu

Office Hours: 11:30-12:30 Wednesdays; Otherwise, open door policy - If my office door is open and I'm not meeting with someone else, please feel free to drop in.

Course web site: <http://sfrc.ufl.edu/Class/FOR3342/>

Lectures: Wednesday, Periods 3-4 (9:35 a.m. - 11:30 a.m.), 219 Newins-Ziegler Hall

Lab: Friday, Periods 3-5 (9:35 a.m. - 12:35 p.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. Also on reserve in library. 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. You will need to obtain a username and password from the instructor to access these materials.

Evaluations and Expectations

Exams: There will be two non-comprehensive exams and one comprehensive final exam. Please plan ahead to attend all exams. *Make-up exams will be given only under extreme circumstances.*

Lab reports: A lab report will be due for each laboratory exercise, usually at the start of the following week's lab (see lecture schedule for exact due dates). *No late 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 web site or copy a colleague's notes.

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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
Comprehensive Final Exam	1	30	30
Lab Reports	6	5	30
	(drop lowest score)		
Quizzes	10	1	10

Final grades will be assigned as: A (90-100 %), B + (85-89 %), B (80-84 %), C+ (75-79 %), C (70-74 %), D+ (65-69 %), D (60-64 %), E (< 60 %).

UNIVERSITY OF FLORIDA POLICIES YOU NEED TO KNOW:

ACADEMIC HONESTY: As a result of completing the registration form at the University of Florida, every student has signed the following statement: I understand that the University of Florida expects its students to be honest in all their academic work. I agree to adhere to this commitment to academic honesty and understand that my failure to comply with this commitment may result in disciplinary action up to and including expulsion from the University.

UNIVERSITY SUPPORT SERVICES: Resources are available on-campus for students having personal problems or lacking clear career and academic goals which interfere with their academic performance. These resources include:

1. University Counseling Center, 301 Peabody Hall, 392-1575, personal and career counseling
2. Student Mental Health, Student Health Care Center, 392-1171, personal counseling
3. Sexual Assault Recovery Services (SARS), Student Health Care Center, 392-1161, sexual counseling
4. Career Resource Center, Reitz Union, 392-1601, career development assistance and counseling

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 the University policies and rules, disciplinary action will be taken as appropriate.

ACCOMODATIONS FOR STUDENTS WITH DISABILITIES: 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.



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**Tree Biology - FOR 3342C - Spring 2009 Syllabus
Master Schedule**

Date	Lecture Wednesday Period 3-4 (9:35-11:30) 219 Newins-Ziegler Hall	Dat	Lab Friday Periods 3-5 (9:35 - 12:35) 219 Newins-Ziegler Hall
Jan 7	Course Introduction; Syllabus; Woody plant structure	Jan 9	How to write a lab report; Lab Exercise 1: Lumber biology: Transport tissue in trees <i>Writeup Due January 16</i>
Jan 14	Primary and secondary growth	Jan 16	Lab Exercise 2: Vegetative shoot development <i>Writeup Due January 23</i>
Jan 21	Primary and secondary growth (cont.)	Jan 23	Photosynthesis - Biochemistry
Jan 28	Photosynthesis - Biological and environmental controls	Jan 30	Lab Exercise 3: Measuring photosynthesis and respiration <i>Writeup Due February 20</i>
Feb 4	Photosynthesis - Biological and environmental controls (cont.) Carbohydrates, respiration	Feb 6	No Lab
Feb 11	Water relations I: water potential; uptake, transport and loss of water	Feb 13	Exam 1 (Structure through Carbohydrates/Respiration)
Feb 18	Water relations II: tree and stand water balance	Feb 20	Lab Exercise 4: Water potential <i>Writeup Due February 27</i>
Feb 25	Water relations III: Water stress and xylem cavitation	Feb 27	Lab Exercise 5: Sap flow and water potential patterns <i>Writeup Due March 19</i>
Mar 4	Water relations III: Water stress and xylem cavitation (cont.)	Mar 6	TBD
Mar 11	No Class - Spring Break	Mar 13	No Lab - Spring Break
Mar 18	Mineral nutrition and nutrient cycling	Mar 19	Lab Exercise 6: Hydraulic conductivity and xylem cavitation <i>Writeup Due March 27</i>
Mar 25	Reproductive biology	Mar 27	Genetics and tree improvement intro
Apr 1	Genetics and tree improvement	Apr 3	Lecture catch-up Exam Review
Apr 8	Radiation effects on tree morphology and physiology	Apr 10	Exam 2 (Water Relations I through Genetics and Tree Improvement)
Apr 15	Energy balance of trees and forests	Apr 17	Lab Exercise 7: Leaf Energy Balance <i>Writeup Due April 22</i>
Apr 22	Lecture catch-up and / or review Last day of UF Classes		
FINAL EXAM "28C" Tuesday, April 28, 12:30-2:30 p.m. 219 Newins-Ziegler			



Abies amabilis - Pacific silver fir