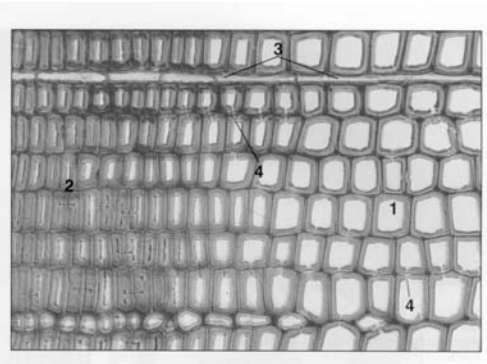
Tree Biology - FOR 3342C - Section 2533 - *Spring 2008 Syllabus*

Instructor: Dr. Tim Martin (359 N-Z, 846-0866, tamartin@ufl.edu)
Teaching Assistant: Carlos Gonzalez, cgonzabe@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) : Kozlowski, T.T. and S.G. Pallardy. 1997. Physiology of Woody Plants, Second Edition. Academic Press, San Diego. 411 p. NOT Available at University Bookstore. You may purchase this text online from vendors such as Amazon.com. Also on reserve in library. Note that the Third Edition was published in Fall 2007 and is also available on Amazon.com.

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. 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.

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 (drop lowest score)	5	30
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:

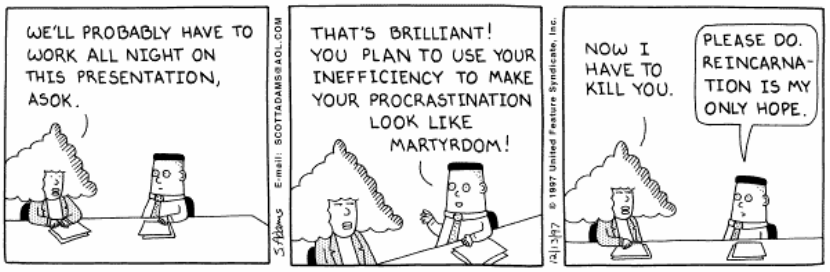
ACADEMIC HONESTY: As a result of completing the registration form at the University of Florida, every student has signed the following statement: I understand that the University of Florida expects its students to be honest in all their academic work. I agree to adhere to this commitment to academic 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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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 9	Course Introduction; Syllabus; Woody plant structure	Jan 11	How to write a lab report; Lab Exercise 1: Lumber biology: Transport tissue in trees *Writeup Due January 18*
Jan 16	Primary and secondary growth	Jan 18	Lab Exercise 2: Vegetative shoot development *Writeup Due January 25*
Jan 23	Photosynthesis - Biochemistry	Jan 25	Photosynthesis (cont.)
Jan 30	Photosynthesis - Biological and environmental controls	Feb 1	Lab Exercise 3: Measuring photosynthesis and respiration *Writeup Due February 22*
Feb 6	Carbohydrates, respiration	Feb 8	Discussion, catch-up, and exam review
Feb 13	Water relations I: water potential; uptake, transport and loss of water	Feb 15	**Exam 1** (Structure through Carbohydrates/Respiration)
Feb 20	Water relations II: tree and stand water balance	Feb 22	Lab Exercise 4: Water potential *Writeup Due February 29*
Feb 27	Water relations III: Water stress and xylem cavitation	Feb 29	Lab Exercise 5: Sap flow and water potential patterns *Writeup Due March 21*
Mar 5	**No Class - Conclave**	Mar 7	**No Lab - Conclave**
Mar 12	**No Class - Spring Break**	Mar 14	**No Lab - Spring Break**
Mar 19	Mineral nutrition and nutrient cycling	Mar 21	Lab Exercise 6: Hydraulic conductivity and xylem cavitation *Writeup Due March 28*
Mar 26	Reproductive biology	Mar 28	Genetics and tree improvement intro
Apr 2	Genetics and tree improvement	Apr 4	Lecture catch-up
Apr 9	Radiation effects on tree morphology and physiology	Apr 11	**Exam 2** (Water Relations I through Genetics and Tree Improvement
Apr 16	Energy balance of trees and forests	Apr 18	Lab Exercise 7: Leaf Energy Balance *Writeup Due April 23*
Apr 23	Lecture catch-up and / or review **Last day of UF Classes**		
FINAL EXAM "2A" **Friday, May 2, 7:30-9:30 a.m.** **219 Newins-Ziegler**			

Abies amabilis - Pacific silver fir