

## Tree Biology - FOR 3342C – Section 2533 - Spring 2020 Syllabus

**Instructor:** Dr. Tim Martin (pronouns: he/him, 359 N-Z, 846-0866, [tamartin@ufl.edu](mailto:tamartin@ufl.edu))

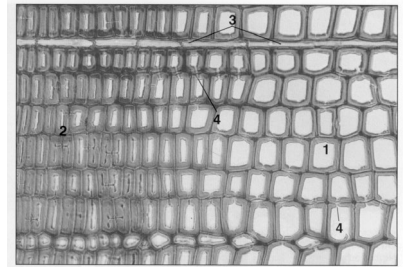
**Teaching Asst.:** Benju Baniya (pronouns: she/her, [benju.baniya@ufl.edu](mailto:benju.baniya@ufl.edu))

**Student 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. Feel free to e-mail as well.

**Course web resources:** UF Canvas Site

**Lectures:** Wednesday, Periods 2-3 (8:30 a.m. – 10:25 a.m.), 219 N-Z 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.

**Objectives:** After completing this course, students should be able to (1) Describe fundamental structural and functional attributes of forest trees; (2) Apply tree physiology knowledge to better understand and predict the responses of trees and forests to their environment and to management.

**Supplemental Text (not required) :** Pallardy, S.G. 2007. Physiology of Woody Plants, Third Edition. Academic Press, San Diego. 480 p.

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

## Evaluations and Expectations

**Exams:** There will be four non-comprehensive exams during the semester. Please plan ahead to attend all exams. *Make-up exams will be given only under extreme circumstances.*

**Lab reports:** Lab reports are turned in on Canvas as a Word document. Pay careful attention to due dates and times as listed on the lab handouts, lecture schedule in the syllabus, and on Canvas. *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 on Canvas covering information from that week's lecture. Quizzes open on Canvas at 12:01 a.m. on Thursday, and close at 8:30 a.m. on Friday. Please make every effort to complete the Canvas quizzes on time. *Make-up quizzes will be given only under extreme circumstances.*

**Follow-up Quizzes:** On Friday mornings in class, that week's quiz will be discussed in small groups and with the instructor. Each student then has the option of re-taking that week's quiz over the weekend, for additional credit. **YOU MUST BE PRESENT AT THE FRIDAY MORNING DISCUSSION TO RECEIVE CREDIT FOR THE FOLLOW-UP QUIZ.** If you are present at the Friday morning discussion, but choose not to take the follow-up quiz, you will be assigned the same grade for the follow-up quiz as you received for the initial quiz. The lowest follow-up quiz score will be dropped.

**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. On the other hand, I heartily encourage you to ask questions or provide comments in class. I promise that all comments will be handled respectfully and as thoroughly as I can. Healthy classroom discussion helps us all learn from each other.

**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	4	15	60
Lab Reports	4 (drop lowest score of 5)	6.25	25
Quizzes	10	1	10
Follow-up Quizzes	10	0.5	5

Final grades will be assigned as: 89.5-100 A, 86.7-89.4 B+, 83.4-86.6 B, 79.5-83.3% B-, 76.7-79.4 C+, 73.4-76.6 C, 69.5-73.3% C-, 66.7-69.4 D+, 63.4-66.6 D, 59.5-63.3% D-, < 59.5% E

### UNIVERSITY OF FLORIDA POLICIES YOU NEED TO KNOW:

This syllabus represents current plans and objectives for this course. As the semester progresses, changes may need to be made to accommodate timing, logistics, or to enhance learning. Such changes, communicated clearly, are not unusual and should be expected.

#### *Late Submissions & Make-up Requests*

It is the responsibility of the student to access on-line lectures, readings, quizzes, and exams and to maintain satisfactory progress in the course.

Requirements for class attendance and make-up exams, assignments and other work are consistent with university policies that can be found at: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

Computer or other hardware failures, except failure of the UF e-Learning system, will not excuse students for missing assignments. Any late submissions due to technical issues MUST be accompanied by the ticket number received from the Helpdesk when the problem was reported to them. The ticket number will document the time and date of the problem. You MUST e-mail your instructor within 24 hours of the technical difficulty if you wish to request consideration.

For computer, software compatibility, or access problems call the HELP DESK phone number—352-392-HELP = 352- 392-4357 (option 2).

#### *Semester Evaluation Process*

Student assessment of instruction is an important part of efforts to improve teaching and learning.

**At approximately the mid-point of the semester**, the School of Forest Resources & Conservation will request anonymous feedback on student satisfaction on various aspects of this course. These surveys will be sent out through Canvas and are not required, but encouraged. This is not the UF Faculty Evaluation!

**At the end of the semester**, students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

#### *Netiquette: Communication Courtesy*

All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussions and chats. Failure to do so may result in loss of participation points and/or referral to the Dean of Students' Office.

<http://teach.ufl.edu/docs/NetiquetteGuideforOnlineCourses.pdf>

#### *Academic Honesty Policy*

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 or 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>.

### ***Inclusive Learning Environment***

This course embraces the University of Florida's Non-Discrimination Policy, which reads,

*The University shall actively promote equal opportunity policies and practices conforming to laws against discrimination. The University is committed to non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, gender identity and expression, marital status, national origin, political opinions or affiliations, genetic information and veteran status as protected under the Vietnam Era Veterans' Readjustment Assistance Act.*

If you have questions or concerns about your rights and responsibilities for inclusive learning environment, please see the instructor or refer to the Office of Multicultural & Diversity Affairs website: <http://multicultural.ufl.edu>.

### ***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/](http://www.dso.ufl.edu/drc/)

### ***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.

### ***Campus Helping Resources***

For issues with technical difficulties for e-learning in Canvas, please post your question to the Technical Help Discussion in your course, or contact the UF Help Desk at:

- [Learning-support@ufl.edu](mailto:Learning-support@ufl.edu) | (352) 392-HELP - select option 2 | <http://elearning.ufl.edu>
- Library Help Desk support <http://cms.uflib.ufl.edu/ask>
- SFRC Academic Hub <https://ufl.instructure.com/courses/303721>

### ***Student Life, Wellness, and Counseling Help***

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.

- Counseling and Wellness resources <http://www.counseling.ufl.edu/cwc/>
- U Matter, We Care <http://www.umatter.ufl.edu/>
- Career Connections Center <http://career.ufl.edu/>
- Other resources are available at <http://www.distance.ufl.edu/getting-help> for online students.

### ***UF/IFAS Field and Fork Food Pantry, <http://pantry.fieldandfork.ufl.edu>***

The Pantry is a resource on the University of Florida campus committed to eradicate food insecurity. Food insecurity is not having a reliable access to nutritious foods for yourself on a regular basis. If you, or anyone you know is experiencing food insecurity, the Pantry is a resource to visit. We offer non-perishable food, toiletries and fresh vegetables grown at the Field and Fork Gardens to provide a well-balanced diet. Protecting the privacy of its guests and providing food to those in need within our campus community is our priority. Our guests do not need any proof of need to use this resource, all that is needed is a Gator 1 ID to prove you are a current Student, Faculty or Staff at the University of Florida.

### ***Student Complaint Process***

The School of Forest Resources & Conservation cares about your experience and we will make every effort to address course concerns. We request that all of our online students complete a course satisfaction survey each semester, which is a time for you to voice your thoughts on how your course is being delivered.

If you have a more urgent concern, your first point of contact should be the SFRC Academic Coordinator or the Graduate/Undergraduate Coordinator for the program offering the course. You may also submit a complaint directly to UF administration:

- Students in online courses: <http://www.distance.ufl.edu/student-complaint-process>
- Students in face-to-face courses: <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>



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Date	Lecture Wednesday Period 2-3 (8:30-10:25) 219 Newins-Ziegler Hall	Date	Discussion / Lecture / Lab Friday Periods 2-4 (9:15 – 11:30) NOTE 9:15 START 219 Newins-Ziegler Hall
Jan 8	Course Introduction; Syllabus; Woody plant structure	Jan 10	<b>Quiz follow-up discussion</b> Woody plant structure (finish) Introduction to labs and How to write a lab report
Jan 15	Primary growth	Jan 17	<b>Quiz follow-up discussion</b> Lab Exercise: Vegetative shoot development <i>Write-up Due January 24</i>
Jan 22	Secondary growth and wood development	Jan 24	<b>Quiz follow-up discussion</b> Lab Exercise: Lumber biology: stem anatomy <i>Write-up Due January 31</i>
Jan 29	<b>Exam 1</b> (Structure through Secondary growth)	Jan 31	Photosynthesis - Biochemistry Lab Exercise: Measuring photosynthesis and respiration <i>Write-up Due February 7</i>
Feb 5	Photosynthesis - Biological and environmental controls	Feb 7	<b>Quiz follow-up discussion</b> Photosynthesis - Biological and environmental controls (cont.)
Feb 12	Respiration Carbohydrates	Feb 14	<b>Quiz follow-up discussion</b> Mineral nutrition and nutrient cycling Water relations I: water potential; uptake, transport and loss of water
Feb 19	<b>Exam 2</b> (Photosynthesis through Mineral nutrition)	Feb 21	<b>Quiz follow-up discussion</b> Water relations I (finish) Lab Exercise: Water potential <i>Write-up Due March 13</i>
Feb 26	Water relations II: Control of transpiration; tree and stand water balance	Feb 28	Radiation effects on tree morphology and physiology – ONLINE LECTURE – view on Canvas lecture page
Mar 4	<b>No Class – UF Spring Break</b>	Mar 6	<b>No Class – UF Spring Break</b>
Mar 11	Water relations II: Control of transpiration; tree and stand water balance	Mar 13	<b>Quiz follow-up discussion</b> Water relations III: Water stress and xylem cavitation
Mar 18	Water relations III: Water stress and xylem cavitation	Mar 20	<b>No Class – Forestry Club Conclave</b>
Mar 25	<b>Exam 3</b> (Water relations I-III, Radiation effects)	Mar 27	Energy balance ONLINE LECTURE – view on Canvas lecture page
Apr 1	Reproductive biology	April 3	<b>Quiz follow-up discussion</b> Lab Exercise: Energy Balance <i>Write-up Due April 10</i>
Apr 8	Genetics of forest trees	Apr 10	<b>Quiz follow-up discussion</b>
Apr 15	Tree improvement	Apr 17	<b>Quiz follow-up discussion</b> <b>Field trip: Austin Cary Forest, details TBA</b>
Apr 22	<b>Exam 4</b> (Energy balance, Reproductive Biology through Tree Improvement) <b>Last day UF classes</b>		



*Abies amabilis* - Pacific  
silver fir