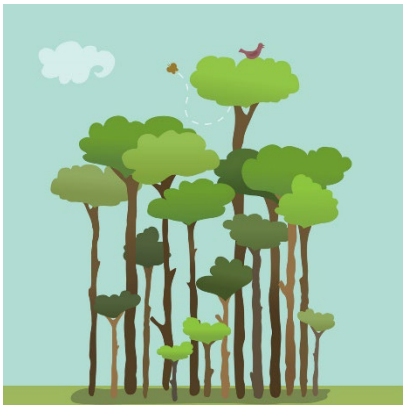

Syllabus
Dendrology of Forest Plants
FNR 3131C – Fall 2025
3 Credits

Instructor
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Course Description

The course concentrates on the identification, classification, nomenclature, uses, and characteristic habitats of major tree, shrub, and groundcover species of the United States and common understory and wetland species in the Southern United States. Emphasis is placed on examples found in plant communities of Florida. We will study how to use different characteristics such as leaf shape, arrangement, bark texture, and habitat to identify trees and other plant species.

The course is divided into two integrated components. Lectures provide background information essential to developing identification skills and laboratory exercises provide hands-on application of identification skills and an opportunity to practice plant identification. Teaching methods include lectures, handouts, field trips, and occasional student presentations, group activities, demonstrations, assigned readings, discussions and hands-on laboratory sessions and field study.

Learning Objectives: At the conclusion of this course, the student will be able to:

- Identify major tree, shrub and herbaceous species in the forests of the United States from living specimens as well as from samples of flowers, twigs, leaves, and fruits;
- Use rules of scientific nomenclature to correctly present the common name and binomial.
- Employ dichotomous plant keys to identify unknown species in the future;
- State major and minor uses of each species; and,
- Describe physical and biological features associated with the major tree species and forest types in other regions of North America.
- Synthesize, write and publicly present information about trees and plants.

Class Website

Canvas (for lectures, print-outs, additional readings, assignments, etc.)
https://lss.at.ufl.edu/

Recommended Texts:

Harrar, E.S. and J.G. Harrar. 1962. Guide to southern trees, second edition. Dover Publications, Inc. New York. 709 p.

Harris, J.G. and Harris, M. W. 2000. Plant Identification Terminology: An Illustrated Glossary Spring Lake Publishing, Spring Lake, UT. 206 p.

Other Sources:

Burns, R.M. and B.H. Honkala. 1990. Silvics of North America, Volumes 1 (conifers) and 2 (hardwoods). U.S.D.A. For. Ser. Agr. Handbook No. 654. Washington, D.C. 675 & 877 p. http://www.na.fs.fed.us/spfo/pubs/silvics_manual/table_of_contents.htm

Clewell, A. G. 1985. Guide to the Vascular Plants of the Florida Panhandle. University Press of Florida, Gainesville. 605 p.

Duncan, W.H. and M.B. Duncan. 1988. Trees of the southeastern United States. The University of Georgia Press, Athens. 322 p.

Godfrey, R. K. 1988. Trees, Shrubs and Woody Vines of Northern Florida and Adjacent Georgia and Alabama. The University of Georgia Press, Athens. 734 p.

Hardin J.W., Leopold D. J. and White, F. M. 2000 Harlow and Harrar's Textbook of Dendrology 9th ed., McGraw-Hill. 544 p.

Harlow, W. M. 1941 Fruit Key & Twig Key to Trees & Shrubs Dover Publications, New York.

Kirkman, L.K., C.L. Brown & D.J. Leopold. 2007. Native trees of the Southeast: An identification guide. Timber Press, Portland, OR. 370 p.

Lakela, O. and Wunderlin, R. P. 1980. Trees of Central Florida. Banyan Books, Miami. 208 p.

Lance, R. 2004. Woody Plants of the SE United States: A Winter Guide University of Georgia Press, Athens. 441p.

Langeland, K. A. and Burks K. C. 1998. Identification & Biology of Non-native Plants in Florida's Natural Areas. University of Florida IFAS. Gainesville. 165 p.

Miller H. J. and Miller K. V. 1999. Forest Plants of the Southeast and Their Wildlife Uses. University of Georgia Press. 454 p.

Myers, R. L. and Ewel, J. J. 1990. Ecosystems of Florida. University of Central Florida Press. Orlando. 765 p.

Nelson G. 1996. The Shrubs & Woody Vines of Florida, Pineapple Press Inc., Sarasota, FL. 391 p.

Nelson G. 1994. The Trees of Florida. Pineapple Press Inc., Sarasota, FL. 338 p.

Riffle, R. L. and Craft, P. 2003. An Encyclopedia of Cultivated Palms. Timber Press. 528 p.

Taylor, W. K. 1998. Florida Wildflowers in Their Natural Communities. University Press of Florida, Gainesville. 370 p.

Wilson, B.F. 1970. The Growing Tree. The University of Massachusetts Press, Amherst. 152 p.

Wunderlin, R. P. and Hansen, B. F. 2003. Guide to the Vascular Plants of Florida, 2nd Ed. University Press of Florida, Gainesville. 787 p.

Tree & Plant Online Resources:

http://www.sfrc.ufl.edu/Extension/florida_forestry_information/forest_resources/ - FL
http://www.shirleydenton.com/plants/plantindex.php - Fl plant photographs by Shirley Denton
http://www.npwrc.usgs.gov/resource/plants/floraso/species.htm#contents – Southern wetland flora

Ask IFAS - EDIS Documents
IFAS Extension Tree Species – Tree Species of Florida
IFAS Extension Shrubs - Shrubs of Florida
IFAS Extension Cycads & Palms - Cycads & Palms of Florida
Fire Effects Information System - fire effects on plants
USDA Plant Database - list of plants and characteristics
USGS National Invasive Species Information System for Plants – National Invasive Species Info - plants
Floridata- database of Florida trees and plants
Florida Museum Plant Collections - UF herbarium
Plant Atlas- plant atlas (USF)
Center for Plant Conservation- endangered plants
UCONN Plant Database - NE US
Dave's Garden- botanical terminology
Florida Museum Preparation of Plant Specimens- how to produce a pressed specimen
VT Dendrology- Virginia Tech dendrology page
Oregon State College of Forestry -Trees of the Pacific Northwest
FDACS Plant Industry Publications - FDACS Publications
IFAS Aquatic Plants - Aquatic plants
IFAS Non-native Florida plants - Non-native plants in Florida
Harvard's Flora of the world - Harvard's Flora of the world (see Flora of North America)
Florida Exotic Pest Plant Council - Florida Exotic Pest Plant Council
Invasive Plant Atlas - Invasive Plant Atlas
Forest Encyclopedia - Forest Encyclopedia
NRCS Flora - NRCS flora information
Many other valuable online resources are available. A Google search can help you find endless amounts of information.

Equipment and Clothing:

I will have 10X hand lenses available. You may also need a sharp pocket knife and clothing that will withstand direct sun, rainy days, and rough vegetation and terrain. A clipboard or small notebook will also be useful as most laboratory sessions are in the field. You also need a canteen or similar vessel for water. If you are prone to irritations or allergies by mosquitoes, fire ants, chiggers, ticks and poisonous plants, it is strongly recommended that you always use repellents and take precautions during and after each lab session. I personally use some kind of mosquito spray to put on exposed skin AND Repel Permanone for ticks and chiggers to put on clothes. (Wal-Mart, Target etc. should have all the selection you need). NOTE: Permanone is extremely lethal to cats. It stays on your clothes for up to 6+ washes. Do NOT apply Permanone to your skin.

If you are allergic to insect bites, or if you have other medical conditions for which emergency treatment may be required, it is your responsibility to inform the instructors before the course starts, about: (1) your specific condition, (2) where you keep your medicine, and (3) how to administer emergency treatment should the situation arise. Field labs are long and tedious (oops, we mean energizing); therefore, if you are diabetic, it is your responsibility to maintain your personal supply of required food or liquids, should you need them, to continue the laboratory.

Lyme disease, which may be contracted through tick bites, is a disease that all people working in natural resources should respect. While not fatal, it can be very painful and even debilitating. It is a risk of the profession; therefore, it is your professional responsibility to wear clothing and repellents that will minimize your chances of getting this disease. Even with these precautions, you should conduct a "tick search" each day after field sessions.

The following is important information you need to know when working outdoors:

- Chiggers: http://edis.ifas.ufl.edu/pdffiles/IG/IG08500.pdf or http://pherec.org/EntGuides/EntGuide6.pdf
- Ticks & Lyme Disease: http://edis.ifas.ufl.edu/pdffiles/MG/MG20400.pdf or http://fmel.ifas.ufl.edu/buzz/clticks.shtml
- West Nile Virus: http://edis.ifas.ufl.edu/IN117
- Dengue Fever: http://edis.ifas.ufl.edu/in699
- Heat: http://solutionsforyourlife.ufl.edu/hot_topics/agriculture/heat_stress.html
- Dehydration: http://fineinstitute.com/patienteducation/?id=11913&lang=English&db=hlt&ebscoType=static&widgetTitle=Spinal+Links

Class and Laboratory Attendance:

Due to the size of each class and lab section, roll call will usually not be taken. As a new natural resources professional you are expected to assume the responsibility of choosing when absence from class or lab is to your personal or professional advantage. For whatever reason may justify your absence, you are entirely responsible for obtaining the information missed from someone other than the instructors. A student missing a lab cannot make up the missed session by attending a lab of the other section. In general, No make-up tests will be given for absence from the exams or quizzes. Of course, some situations merit exceptions (hurricanes, death in the family, serious illness).

Examinations/Graded Exercises:

Lectures will be directed discussions, explanations and question/answers from the material that you have been assigned to read. They will also contain additional information that is not in the text or this manual. Outlines for most lectures are included to assist your note-taking.

Lecture Exams will be comprehensive, covering all material presented in lectures, laboratory and reading assignments from the beginning of the course. The format of each exam will vary, and may include definitions, compare/contrast, short answer, fill in the blanks, multiple choice, true/false, list/explain, crossword puzzle completions, construction of plant identification keys and maybe short essay questions, and possibly a real plant specimen to identify. These exams will be given in class during normal class times, or they may be online through Canvas. Exams in Canvas are timed exams. You will only be able to access the exam ONCE; therefore, be sure you have enough time to complete it and are on a trustworthy internet connection. DO NOT WAIT UNTIL THE LAST MINUTE TO COMPLETE ONLINE EXAMS IN THE EVENT A SITUATION ARISES (e.g., computer, internet, or power outage)!

Laboratory:

A plant identification-information quiz will be given at lab sessions as indicated on the course schedule and the time of the quiz may vary depending on the structure of the lab for that day. The format of each quiz will remain constant, but the length and value of the quizzes will vary. For each plant on each quiz, you will be expected to print, correctly and legibly in scientific nomenclature, the family to which the plant belongs, the binomial name of the plant, the accepted common name of the plant, and answer any question regarding the plant that has been discussed in lecture, lab or the text and readings. There will be a time limit on each identification specimen on each quiz. In order to allow you to adjust to the testing type and procedures, initially, you will be given 2 minutes for each plant. The time limit will be reduced gradually to 30 seconds per plant before the final field exam. Correct spelling and presentation of scientific nomenclature (family and binomial) is essential! Regardless of the weights of laboratory or lecture quizzes, spelling credit will be deducted from each word of scientific nomenclature that is not spelled or presented correctly! The Final identification exam will be indoors and prepared from both dry and fresh plant samples.

Plant Presentation:

Each student will prepare a short PowerPoint presentation on two selected species, using class references and whatever additional library resources you prefer. Your primary objective is to briefly describe the species, its silvics, phenology and range, then focus the major portion of the presentation on the morphological characteristics necessary to identify the

species. Your secondary objective is to make comparisons or contrasts to other species with which the plant may be easily confused. Your presentation should conclude with a list of references. The total presentation time for your project should not exceed 5 minutes for each species. Photographs for morphological characteristics should be your own for all plant parts available during the time of the class and photo credits must be included for all photos in the presentation. You will have an opportunity to narrate (record) the two species as **separate** presentations and they will be uploaded to Canvas for review. (This is where I can determine if you have more than 5 minutes of presentation!). The 50 possible points will be determined based on Content – Is the information complete and correct based on the above project description? and Proper use of terminology (20); Organization & coherence – Logical flow, clarity of speech. (10); Species ID – Clear display of plant and plant parts. (10); Professionalism - (10). **This project will be due by midnight on 16 Nov. 2025.**

Herbarium Collection:

You may find yourselves in future professional positions in which the collection and identification of new/unknown plants will be important for your own reference or for presentation to others. You will **prepare a herbarium collection of 50 specimens** over the course of the semester. Proper press and mounting procedures will be demonstrated in the lab. Collected specimens should be of good quality, pressed flat and dried. Once specimens are pressed and dried, they should be mounted on good quality paper for inclusion in a loose-leaf binder or similar collection system. Mounted specimens should be arranged to show the distinguishing characteristics of the leaves, buds and twigs. On the bottom, right, front side of each mounted specimen, a herbarium label (including correct scientific name with authors, location of live specimen, associated species, date of collection, your name, and other information) will help you in later review of your collection. Specific instructions for the herbarium collection will be provided to you in class. Collections will be graded on accuracy, completeness, and neatness. Grading for correctly identified specimens will be as follows: Completeness of sample (includes leaves and twig) = 1 point, accurate labeling = 1 point. Total collection point value = (2 points per specimen x 50 specimens) + 5 points for table of contents + 5 points for 25 families + 5 points for overall presentation (neatness). **This project will be due by 5 pm, 21 Nov. 2025.**

ASSESSMENT AND GRADING:

For information on current UF policies for assigning grade points, see Grades and Grading Policies < University of Florida

Student Evaluation

- The lecture topic quizzes, two exams, and final exam will be comprised of multiple choice, short answer, true/false, matching and short essay questions based primarily on lecture material, but also including major concepts from the lab. *Only students with a valid and prior excuse will be given makeup tests.*
- The instructor reserves the right to add 1-3 points to the final percentage score based on meaningful class participation, demonstrated student interest, overall student dedication, or demonstrated and consistent improvement over the course of the semester.

Policy on Questioning Test Scores: Any questions regarding your performance on any test are welcome. Questions on quiz or exam scores must be addressed before the end of the next class period after the quizzes or exams are returned. You should request an appointment – to maintain student privacy, scores and grading will not be discussed in the classroom after class. The instructor reserves the right to reevaluate the entire quiz or exam.

Grades for the course will be based on a total of 865 points allocated as follows:

6-8 Identification quizzes (15-20 plants each)		200 points
1 Identification final (50 plants)		100 points
10 lecture topic quizzes (10 points each)		100 points
Lecture Exams (2 @ 100 points each)		200 points
Final Exam		100 points
Projects		
Plant Collection		115 points
Plant Presentation		50 points
	Total	865 points

*ID Quiz number will depend on weather and other related schedule adjustments, but the total ID Quiz value will reflect 200 points

Grading follows University standards and will be based on the following scale:

94-100%	A
90-93%	A-
87-89%	B+
83-86%	B
80-82%	B-
77-79%	C+
73-76%	C
70-72%	C-
67-69%	D+
63-66%	D
60-62%	D-
< 59%	E

UF Academic Policies & Resources

Click here to review UF Academic Policies & Resources.

Computer Requirement: Access to and ongoing use of a computer are required of all students to complete their degree programs successfully. The university expects each student entering the university and continuing students to acquire computer hardware and software appropriate to the degree program. Competency in the basic use of a computer is a requirement for graduation (www.circa.ufl.edu/computers).

INFORMATION SOURCES: The tentative lecture schedule is subject to change at the instructor's notice and is subject to weather and day length constraints.
NOTE: The visual aspects and memorization requirements of this course make it imperative that students view all lectures and read all handouts.

COVID RELATED PRACTICES:
We will have face-to-face instructional sessions to accomplish the student learning objectives of this course. In response to COVID-19, In the event we must transition to 100% online instruction, we will utilize Zoom meetings for review sessions.
The University policy below governs your agreement to engage your camera if the meeting is to be recorded.

Our class sessions may be audio-visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image agree to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who unmute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials are prohibited.

We do not presently have any Zoom class sessions scheduled. However, if the situation changes, we will not be recording Zoom class sections, so your video or image must remain visible. Unauthorized recording and unauthorized sharing of recorded materials from this course are prohibited.