

Arboriculture Spring 2024

ORH 4242 & HOS 6932, 4 credits

Building: MAEB

Room: 0238

Tuesday: 8:30 to 10:25 and Thursday: 9:35 to 10:25

Office hours: By appointment only

Instructor: Ryan Klein, Ph.D. Assistant Professor of Arboriculture, Environmental Horticulture Department

Email: ryanwklein@ufl.edu

Phone: (352) 284-1861

Teaching Assistants:

Teagan Young – Email: teagan.young@ufl.edu

Suzie Suhendy – Email: c.suhendy@ufl.edu

Course Communications:

1. Messaging via Canvas – This should be used as your primary source of contact with the instructor outside of class time (used to report problems accessing materials, other non-arboriculture computer issues, and to schedule appointments)
2. Discussion board – This is used for completing any missed weekly in-class discussions due to a students' absence. Discussion questions will be posted on Canvas following each class. If a student misses' class, they are responsible for submitting a response to that week's discussion question by Sunday 11:59 pm.

Required Text: Arborists' Certification Study Guide, Third Edition - Sharon Lilly (ISBN – 978-1881956693)

Student Lab Fees: \$0

Course Description: Arboriculture is the care of trees in developed landscapes. Arboricultural principles of tree structure, tree biology, and soil attributes are presented with consideration of techniques and treatments designed to evaluate and improve health and mechanical stability. Lectures, videos, and weekly assignments are augmented by many applied indoor and outdoor exercises that students conduct under the direction of the instructor. Several times throughout the semester, students will be exposed to industry professionals from various backgrounds as a means of providing real-world experiences and a better understanding as to the opportunities available post-graduation. Scheduled assignments and regular interaction among students and instructor ensure that all remain engaged in the topics presented in 12 modules.

Prerequisite Knowledge and Skills: Basic understanding of biological principles including introductory Dendrology, Botany, or equivalent is helpful but not necessary.

Course Goals and Objectives: The information presented in the classroom, provided in the readings and videos, conveyed by guest lecturers, and learned through hands-on lab will help students comprehend

the science and application of arboriculture in both theory and practice. By the end of this course students will be able to:

- Understand tree structure and stability in order to evaluate associate tree features in the field.
- Interpret internal tree conditions from visual signs and make mitigation recommendations.
- Articulate causes of wood decay in trees and determine how this can impact structural integrity.
- Grow trees with high quality roots and crown in a nursery and understand how trees are graded.
- Decipher the components of tree anchorage and how this can impact public health and safety.
- Evaluate and design sites to support trees from establishment to maturity.
- Compose tree planting and establishment specifications that match the species to the site.
- Know proper tree planting techniques and aftercare that support establishment and survival.
- Prescribe pruning treatments to mitigate conditions of concern and develop a strong structure.
- Diagnose structural and health issues that can lead to early mortality and structural failures.
- Understand tree risk assessment and provide defensible logic pertaining to a given risk.

Instructional Methods: Course materials are presented to students in a wide variety of formats because there are many styles of learning. Information presented in these formats' overlaps. Some students will learn best by attending lectures and completing the weekly field assignments, some will gain more by spending considerable time with the Landscape Plants website, while others may find the text to be the most engaging method of learning. The required text presents many of the concepts in a complete, well-organized package together with self-assessment tools. This is augmented with videos, supplemental readings, and guest lectures from industry professionals.

The outdoor exercises and techniques presented by the instructor and others will demonstrate the practicality of concepts. As a method of demonstrating your proficiency in arboriculture, students will devote considerable time to finding trees and applying treatments outdoors in the real world. The four to six required field labs (one-hour sessions) in Gainesville will introduce students to industry professionals and allow students to demonstrate their comprehension of the course material. Key evaluation strategies and treatments will be demonstrated to students during these important sessions. There is no formal paper required for this course; however, there are many short writing assignments.

How to Excel in this Course:

1. Prior to attempting assignments: read the text and web site, absorb the PowerPoint lectures, view the videos, and then tackle assignments. Your success will be maximized using this approach! Do not attempt to complete assignments without preparing in this manner because you will be unfamiliar with the appropriate vocabulary. If you do not use appropriate vocabulary, concepts, and approaches, your grade will reflect this shortcoming. **Note:** To accommodate different learning styles, you will notice that concepts presented in the text, web passages, and lectures overlap to a certain extent.
2. Students will be outside looking at trees for a good portion of the course! Consider printing all assignments for the module you are working on (typically a page or two) and **highlight** what you need to locate and photograph. Take one trip to find as many of these as possible before returning to your computer to complete and post your assignments.
3. Post assignments (including images) on time.

Student Responsibilities:

Students agree to live up to their responsibilities in a timely manner. Students will need access to tracing paper, pruning saw, digging tool, a camera or cell phone with video recording capability.

Course Policies

Attendance Policy/Deadlines: Class will meet Tuesday from 8:30 to 10:25 and Thursday from 9:35 to 10:25. Students are expected to attend classes in person unless 1) they have a valid excuse for being absent (e.g., illness, attending a conference) or 2) live and work at an REC (i.e., distance learner). Students who miss lectures are required to respond to the questions on the weekly discussion board in order to receive participation credit for a given module. Likewise, students who are absent from any of the mandatory field labs will need to complete a mini literature review to receive credit for each of the missed classes. Assignments are due every Sunday by 11:59 pm.

Makeup Policy for Field Labs: Failure to appear to a field lab will result in a zero for that week's lab and will count towards your final grade for the course. **Students** that are unable to make a lab session can choose to write a 3-page single-spaced research/review paper on a relevant topic for that weeks' lab. The paper will be due 7 days after the field lab. Submissions should be sent to the instructor via canvas message.

Exam Policy: There is a mid-term and a final. Both are comprehensive of material covered from the beginning of the course. Exams are multiple choice, short answer, and scenario based. Students will have 2 hours to complete the mid-term (50 questions) and 3 hours for the final exam (100 questions). Both exams are closed book/open notes. Students will have a one-week window to complete each exam.

Course Calendar of Major Events

January 14, Sunday 11:59 pm:	Arboriculture Baseline Knowledge Quiz due
January 21, Sunday 11:59 pm:	Module 1 – Anatomy and Biology: assignment due
January 28, Sunday 11:59 pm:	Module 2 – Structure and Mechanics: assignment due
February 4, Sunday 11:59 pm:	Module 3 – Tree Identification and Selection: assignment due
February 11, Sunday 11:59 pm:	Module 4 – Soil Science and Water Management: assignment due
February 18, Sunday 11:59 pm:	Module 5 - Plant Health Care and Nutrition: assignment due
February 20, Tuesday:	Mid-term Review
February 25, Sunday 11:59 pm:	<u>Mid-term Exam Due</u>
February 25, Sunday 11:59 pm:	Module 6 – Site Preparation and Design: assignment due
March 10, Sunday 11:59 pm:	Module 7 – Installation and Establishment: assignment due
March 17, Sunday 11:59 pm:	Module 8 - Pruning: assignment due
March 31, Sunday 11:59 pm:	Module 9 – Tree Nurseries: assignment due
April 7, Sunday 11:59 pm:	Module 10 – Diagnostics and Disorders: assignment due
April 14, Sunday 11:59 pm:	Module 11 – Construction and Veteran Tree Care: assignment due
April 21, Sunday 11:59 pm:	Module 12 – Tree Risk Assessment: assignment due

April 23, Tuesday:

Final Exam Review

May 2, Thursday 11:59 pm:

Final exam Due

Assignment Details and Grading Rubrics

Classroom Discussions (participation)/Canvas Discussion Board: 10% of grade

1. The instructor will assign weekly in-class discussion questions for students to go over in groups and then share with the entire class. The questions are designed to evoke critical thinking pertaining to important topics discussed during weekly lectures.
2. The discussion board will be used by the **students** to ask clarifying questions of the instructor regarding assignments and arboriculture topics in general.
3. Weekly questions that were covered in class will be posted to the discussion board in Canvas. Students that miss class will be responsible for answering that week's discussion question by Sunday 11:59 pm in order to receive credit for that particular module. If a student is unable to attend class and chooses not to respond to the weekly discussion question, then they will receive a zero for that particular week.

Classroom Discussions/Discussion Board Grading Rubric:

1. Actively participate in both group and entire class discussions or discussion board – an understanding of the subject matter requires that students have completed their weekly assignments (100%)

Assignment Board: 45% of grade

Students will post all assignments to their individual assignment board by Sunday at 11:59 pm. Essentially, this is the lab portion of the course. This will be a very important method for us to discuss your comprehension of arboriculture. Assignments can be used as a showcase for a potential employer and can serve as a technical resource for you in the future.

Students may choose to not answer one of the listed questions (unless noted to be mandatory) for each module. However, you **MUST** complete ALL questions in a module that include posted photographs! You will be responsible for learning the material you omit, and it will be included in the two exams. Assignments for each module will be in the form of a word document that will be posted to canvas on the Sunday before they are due. Include your response to the assignments directly underneath the text written for each assignment. Following submission of your completed Word file, **instructor** will post comments/questions/suggestions on your Word file through "Track changes" along with one grade to the entire module. These comments are meant to make you think more critically about your assignments.

Due Dates and Grade Points

1. Each Sunday by 11:59 pm - **Students** post completed assignments for the current module. Modules submitted by Monday 11:59 pm will be accepted, but 4 points (out of 10) will be subtracted from the grade. Modules submitted after that will not be graded and will receive a zero.
2. Sunday the week after an assignment is due – **Instructor** posts your Word file with comments and a grade for that module. Up to 10 points will be awarded according to the assignments board grading rubric for a total of 10 x 12 assignments = 120 points for the course.

3. **Your lowest grade** (i.e., 1 of 12) will be dropped from calculation of your final grade for the course! However, you will be responsible for this material on exams and at the field labs.

Be sure to read assignments completely well in advance of due date because many of them have an outdoor component (consider the weather in your planning) and some of them have a 3 to 4-page written report requirement. Grading rubric includes grammar, spelling, and punctuation components. Those speaking English as a second language will be accommodated accordingly.

Assignments Board Grading Rubric:

One grade will be assigned to each module based on

1. Completing all titled (including those that are mandatory) assignments (20%)
2. Answering the question(s) accurately using appropriate arboriculture vocabulary and concepts (20%)
3. Labeling or identifying relevant parts clearly and accurately (20%)
4. Writing in complete sentences using appropriate grammar, spelling, and punctuation (where writing text passages are appropriate) (20%)
5. Comprehension of arboriculture subjects relevant to the module (20%)

For each student, there is a total of 12 assignment grades for the semester. The rigor of grading will increase during the semester because the **student** will be expected to improve in all aspects of the grading rubric throughout the semester.

Note: Students are welcome to use the Landscape Teaching Laboratory which is a 10-acre outdoor facility located in Gainesville. It is open most days 8 AM to 4 PM. The site contains many trees of different species and sizes and is available for digging into soil; selected tools are available to help complete some assignments. Make an appointment well in advance (several days) with Chris Harchick (cell: (352) 262-9239).

On-Campus Field Labs: 15% of grade

There will be 10 mandatory field labs conducted in Gainesville (I.e. main campus, city park, tree unit) during regularly scheduled class period. These will be a combination of guest lectures, skills assessment, and field instruction and will focus on arboriculture field skills covered in past modules. Representatives from the industry will participate in these sessions and offer perspectives based on professional experiences. In order to receive credit for each field lab, attendance is mandatory. In the event a has a valid excuse for not attending one of the field labs, they have the option submit a research/review on a topic relevant to that week's module in order to receive credit for the field lab. All makeup submissions are due within 10 days from the date of the missed field lab. In order to count for full credit, papers should be a minimum of 3-pages single-spaced not including the literature cited section.

Grading Rubric: Grades will be assigned to students during field labs by the following:

1. Attendance (mandatory)
2. Participation

Written Examinations: 30% of grade

Two tests are planned, one mid-term (Due February 25th - 13% of final grade) and one final exam (Due May 2nd - 17% of final grade). These will be timed tests are to be closed book/open notes. They will be multiple choice, fill in the blank, matching, and/or true/false with many questions so students will be

challenged to think quickly. Tests will include previously covered material as well as questions not covered in other assignments, primarily from the reading material.

Feedback on Assignments:

All assignments will be graded and returned with feedback within 2 weeks of the due date. Feedback on assignments will be added directly to each submission file.

*Note – there are no point/grading differences for undergraduate/graduate students or distance learners. All students will be evaluated equally based on their performance in the class.

Summary of Assignments (% of total grade):

Classroom Discussions (participation)/Canvas Discussion Board:	10%
Assignment Board:	45%
On-Campus Field Labs:	15%
Written Examinations:	30%
Overall Grade:	100%

Course Grade:

- 93-100% A
- 90-92% 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-
- <60% E

UF Policies

Grades and Grade Points

For information on current UF policies for assigning grade points, see <https://catalog.ufl.edu/UGRD/academic-regulations/grades-gradingpolicies/>.

Absences and Make-Up Work

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>.

COVID Response Statements

For face to face courses a statement informing students of COVID related practices such as:

We will have face-to-face instructional sessions to accomplish the student learning objectives of this course. In response to COVID-19, the following policies and requirements are in place to maintain your learning environment and to enhance the safety of our in-classroom interactions.

- You are required to wear approved face coverings at all times during class and within buildings. Following and enforcing these policies and requirements are all of our responsibility. Failure to do so will lead to a report to the Office of Student Conduct and Conflict Resolution.
- This course has been assigned a physical classroom with enough capacity to maintain physical distancing (6 feet between individuals) requirements. Please utilize designated seats and maintain appropriate spacing between students. Please do not move desks or stations.
- Sanitizing supplies are available in the classroom if you wish to wipe down your desks prior to sitting down and at the end of the class.
- Follow your instructor's guidance on how to enter and exit the classroom. Practice physical distancing to the extent possible when entering and exiting the classroom.
- If you are experiencing COVID-19 symptoms (Click here for guidance from the CDC on symptoms of coronavirus), please use the UF Health screening system and follow the instructions on whether you are able to attend class. Click here for UF Health guidance on what to do if you have been exposed to or are experiencing Covid-19 symptoms.
- Course materials will be provided to you with an excused absence, and you will be given a reasonable amount of time to make up work. Find more information in the university attendance policies.

Online Content Using Recorded Materials

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 are agreeing 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 un-mute 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 is prohibited.

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. 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/>.

Academic Honesty

UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students 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.” The Honor Code (<https://sccr.dso.ufl.edu/process/student-conduct-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

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

Students experiencing crises or personal problems that interfere with their general well-being are encouraged to utilize the university’s counseling resources. The Health and 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.

Health and Wellness

U Matter, We Care: If you or someone you know is in distress, please contact umatter@ufl.edu, 352-392-1575, or visit <https://umatter.ufl.edu/> to refer or report a concern and a team member will reach out to the student in distress.

Counseling and Wellness Center: Visit <https://counseling.ufl.edu/> or call 352-392-1575 for information on crisis services as well as non-crisis services.

Student Health Care Center: Call 352-392-1161 for 24/7 information to help you find the care you need, or visit <https://shcc.ufl.edu/>.

University Police Department: Visit <https://police.ufl.edu/> or call 352-392-1111 (or 9-1-1 for emergencies).

UF Health Shands Emergency Room / Trauma Center: For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; <https://ufhealth.org/emergency-room-trauma-center>.

GatorWell Health Promotion Services: For prevention services focused on optimal wellbeing, including Wellness Coaching for Academic Success, visit <https://gatorwell.ufsa.ufl.edu/> or call 352-273-4450.

Additional Resources

E-learning technical support: Contact the UF Computing Help Desk at 352-392-4357 or via e-mail at helpdesk@ufl.edu.

Career Connections Center: Reitz Union Suite 1300, 352-392-1601. Career assistance and counseling services <https://career.ufl.edu/>.

Library Support: various ways to receive assistance with respect to using the libraries or finding resources. <https://cms.uflib.ufl.edu/ask>

Teaching Center: Broward Hall, 352-392-2010 or to make an appointment 352- 392-6420. General study skills and tutoring. <https://teachingcenter.ufl.edu/>.

Writing Studio: 2215 Turlington Hall, 352-846-1138. Help brainstorming, formatting, and writing papers. <https://writing.ufl.edu/writing-studio/>.

Student Complaints On-Campus: Visit student code of conduct page for mor information. <https://sccr.dso.ufl.edu/policies/student-honor-%20code-student-conduct-code/>

On-Line Students Complaints: <https://distance.ufl.edu/student-complaint-process/>.

Services for Students with Disabilities

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, <https://disability.ufl.edu/students/get-started/>) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.