Arboriculture Spring 2022

ORH 4242, 4 credits

Building: MAEB
Room: 0238
Tuesday: 10:40 to 11:30 and Thursday: 10:40 to 12:35
Office hours: By appointment only

Instructor: Ryan Klein, Ph.D. Candidate, Environmental Horticulture Department
Email: ryanwklein@ufl.edu
Phone: (352) 284-1861

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.


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:
By the end of this course students will be able to:
- Evaluate tree structure and stability
- Interpret internal tree conditions from visual signs
- Articulate causes of wood decay in trees
- Grow trees with high quality roots and crown in a nursery
- Decipher the components of tree anchorage
- Evaluate and design sites to support trees
- Compose tree planting and establishment specifications
- Know proper tree planting techniques
- Prescribe pruning treatments on roots, stems, and branches
- Diagnose structural and health issues
- Outline a tree risk assessment protocol

**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 Tuesdays from 10:40 to 11:30 and Thursdays from 10:40 to 12:35. 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 2 to 3-page double-spaced research paper on a relevant topic for that weeks’ lab. The paper will be due 7 days after the field lab.

**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.

### Course Calendar of Major Events

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>January 9, Sunday</td>
<td>Practice assignment due (not graded)</td>
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<tr>
<td>January 23, Sunday</td>
<td>Module 1 – Anatomy and Biology: assignment due</td>
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<td>January 30, Sunday</td>
<td>Module 2 – Structure and Mechanics: assignment due</td>
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<td>February 6, Sunday</td>
<td>Module 3 – Tree Identification and Selection: assignment due</td>
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<tr>
<td>February 13, Sunday</td>
<td>Module 4 – Soil Science and Water Management: assignment due</td>
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<tr>
<td>February 20, Sunday</td>
<td>Module 5 - Plant Health Care and Nutrition: assignment due</td>
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<tr>
<td>February 22, Tuesday</td>
<td>Mid-term Review</td>
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<tr>
<td>February 27, Sunday</td>
<td>Module 6 – Site Preparation and Design: assignment due</td>
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<tr>
<td>March 6, Sunday</td>
<td><strong>Mid-term Exam Due</strong></td>
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<tr>
<td>March 13, Sunday</td>
<td>Module 7 – Installation and Establishment: assignment due</td>
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<tr>
<td>March 27, Sunday</td>
<td>Module 8 - Pruning: assignment due</td>
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<td>April 3, Sunday</td>
<td>Module 9 – Tree Nurseries: assignment due</td>
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<td>April 10, Sunday</td>
<td>Module 10 – Diagnostics and Disorders: assignment due</td>
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<tr>
<td>April 17, Sunday</td>
<td>Module 11 – Construction and Veteran Tree Care: assignment due</td>
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<tr>
<td>April 19, Thursday</td>
<td>Final Exam Review</td>
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<tr>
<td>April 24, Sunday</td>
<td>Module 12 – Tree Risk Assessment: assignment due</td>
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**Final exam given at listed time for the course**

### Assignment Details and Grading Rubrics

**Classroom Discussions/ 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.
2. This 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 who miss class will be responsible for answering that week’s discussion question by Sunday 11:59 pm.

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 your 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 competed 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 six to eight 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 observational and field skills of material covered in past modules. Representatives from the industry will participate in these sessions. Failure to appear to a field lab will result in a zero for that session.

Grading Rubric: Grades will be assigned to students during field labs by the following:
1. Attendance
2. Participation

Written Examinations: 30% of grade
Two tests are planned, one March 8 (13% of final grade) and one final exam (17% of final grade). These will be timed tests designed to be “closed book”. 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.

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% F
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/.


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


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.