

Syllabus
Dendrology (216:272)
Fall, 2022

Lecture: Monday 12:10 - 1:30 Ruth Adams building (RAB) room 204

Lab: Wednesdays 8:30-11:30 (scheduled in Ruth Adams building (RAB) room 204, but actually we meet in the field at locations announced in class

Lecture/Activity: Thursday 12:10-1:30 Ruth Adams building (RAB) room 204

Instructor: Jason Grabosky
Dept. of Ecology, Evolution & Natural Resources
Waller Hall 209
848.932.0050
grabosky@sebs.rutgers.edu

Office hours: By appointment

Student assistants (SAs):
Atomu Saul

Required texts:

1. *Harlow & Harrar's Textbook of Dendrology, Ninth Edition*, by Hardin, Leopold and White ISBN 978-0-07-366171-1
2. *Fruit Key & Twig Key to Trees & Shrubs*, by Harlow, William M. ISBN 0-486-20511-8
3. approximately 200 white ruled index cards (3 x 5 inch) for use in lab field quizzes and exams

Recommended texts:

Trees of New Jersey and the Mid-Atlantic States, by NJDEP, C. Martine
Shrubs and Vines of New Jersey and the Mid-Atlantic States, by NJDEP C. Martine
Bark, A Field Guide to Trees of the Northeast, by Wojtech, M.

LEARNING GOALS:

Departmental/Major Learning Goals:

- Goal 1: Explain basic population, community ecology, and ecosystem-level concepts.
- Goal 4: Effectively utilize software, hardware, field and laboratory techniques commonly used in the study of ecology, evolution, and natural resources management.
- Goal 7: Evaluate ecology, evolution, and natural resource management concepts in a global context.

Course specific learning goals:

- Understand the organization and methods of tree identification in the field
- Understand basic relationships in plant taxonomy

- Understand the role of the site environment on resulting forest tree species complexes and forest community structure
- Understand the definition and utility of the many terms used in describing plant morphological character

COURSE DESCRIPTION

This course provides an introduction to trees and other woody plant species that are commonly found in New Jersey and the region. While locally established plant species are emphasized, other noteworthy species are also covered from other regions of the country and world.

Lecture: Students are provided with an overview of basic plant taxonomy and nomenclature as well as plant morphology. The major physiographic provinces and soil types of New Jersey are discussed. Plant families and genera are emphasized in lecture and field walks as lab. Important species that cannot be seen in lab may also be discussed. Diagnostic characters for plant families and genera are provided. Economic, landscape, and horticultural uses of the various plant taxa are reviewed as well as their geographic ranges. Noteworthy plant insect and disease problems are also occasionally discussed. A series of weekly modules and activities will be assigned to solidify use of terms or use of tools such as vegetative keys.

Laboratory: Except for rarely occurring scheduled indoor sessions, ***lab is always held outside*** at various localities both on and off campus. Check the lab schedule for each week's meeting place. Last minute changes to the meeting schedule will be announced in lecture. ***Dress appropriately for walking distances outside, in any weather.*** This means appropriate shoes and attire for walking, often 2-5 km per class, where insects, ticks and poison ivy are present. Species are emphasized in lab, and students see trees in varied contexts and life-stages in the field. We will walk through various locations both on and off campus where plant species identification will be covered. We will emphasize plant morphology and character traits related to family, and genus.

Service: Each student needs to develop a collection of 500 acorns for donation, explained below.

STUDENT EVALUATION and grade assessments

40% Lecture: The lecture will constitute **40%** of the course grade. Weekly activities and two preliminary exams will be given in lecture. Many weeks, a short activity linked to a module and assignment will be given in lecture. This activity will reinforce or introduce material that has been, or is to be, presented in lecture. Lecture activities will comprise 40% of the lecture grade (16% of the total course grade). Failure to attend a class without an official excuse will result in a zero being recorded for that week's lecture activity. 20% of this lecture grade (8% of total course grade) will be linked to contributions to the class discussion boards on the canvas site. You'll be asked to read the prompt, provide a response in the discussion and then provide a follow up response

to other student's contributions. We'll formalize the process in class. Finally the two preliminary exams make up the rest of the lecture grade (16% of the total class grade) As such, the lecture preliminary exams will each constitute 8% of the final grade for the course both exams are cumulative measures of content covered in the course.

Students can develop extra credits to offset a lost grade or poor grade by:

1. Creation of a professionally organized teaching demonstration mount for identification of a genus and-or species or an organized mount of several species to aid in teaching tree identification (done with plan approval of the instructor).
2. Students can have a one-time, single lecture activity grade replaced as full credit by turning in 500 Northern red oak (*Quercus rubra*) acorns or a different approved species **in addition to the course requirement of 500 viable Red Oak Acorns**

50% Laboratory: The lab will constitute **50%** of the course grade. Weekly quizzes, a midterm and a final will be given in lab. All quizzes and exams are cumulative in species covered in previous classes. Each week a quiz will be given in lab on plants covered in previous labs. Unlike the lecture quizzes, the weekly lab quizzes follow a standard format. For each test specimen given, students are expected to provide the family, genus, species and common names. Spelling counts. The student will have between 2 and 3 minutes to fully identify the quiz specimen. This is to allow us time in field to see the "learning trees" for the week. The quizzes comprise 50% of the lab grade (25% of the course grade). Failure to attend a class lab without an official excuse will result in a zero for that week's lab quiz. Occasionally, **as possible with the Instructor and Student assistants**, extra-credit quizzes will be given (usually outside of regular class hours). Extra-credit quizzes will be used to replace the lowest quiz grades, up to a maximum of the student's two lowest quiz grades. If more than two extra-credit quizzes are taken, only the two highest replacement grades will be used. The midterm and final lab exams are longer versions of the quiz format. Each represents 12.5% of the final course grade.

Given the nature of the class, alternative learners with documentation are encouraged to meet with the professor **as soon as possible** to set up a strategy for their needs; to ensure an equal chance of demonstrating mastery of the information.

10% Service: EVERY student will need to collect 500 Northern red oak (*Quercus rubra*) acorns to be provided to Pinelands Nursery as a service component to the class. These propagules are used to provide a seedling to every graduate of SEBS during convocation ceremonies. This service action is worth **10%** of the final grade. Acorns must be visually viable (free of obvious defects and borer infestation). Please understand, it is very easy to verify both species and visual viability, **and represents a tradition that began before many of you were born**. Acorns are to be handed in as a collection in brown paper bags, labeled with the species and student name to allow for credit. Clear plastic large ziplock bags can be used, if the bags are not fully sealed to allow for air exchange. Again

they need to be labeled with species and student name to allow for us to accurately provide credit to the student.

Grading scale: A: 90 and above; B+: 87-89; B: 80-86; C+: 77-79; C: 70-76; D: 60-69; F: 59 and below.

Note/warning: It is very easy to fall behind in this course. Failure to regularly attend lecture and lab sessions will make it difficult to receive a grade reflecting an individual's talent.

Extra credit note: The only extra credit allowed for this course will be the acorns and/or the teaching tool project for lecture, and the extra-credit quizzes for lab.

Academic Integrity at Rutgers

Principles of academic integrity require that every Rutgers University student:

- properly acknowledge and cite all use of the ideas, results, or words of others
- properly acknowledge all contributors to a given piece of work
- make sure that all work submitted as his or her own in a course or other academic activity is produced without the aid of unsanctioned materials or unsanctioned collaboration
- obtain all data or results by ethical means and report them accurately without suppressing any results inconsistent with his or her interpretation or conclusions
- treat all other students in an ethical manner, respecting their integrity and right to pursue their educational goals without interference. This requires that a student neither facilitate academic dishonesty by others nor obstruct their academic progress
- uphold the canons of the ethical or professional code of the profession for which he or she is preparing.

Adherence to these principles is necessary in order to insure that:

- everyone is given proper credit for his or her ideas, words, results, and other scholarly accomplishments
- all student work is fairly evaluated and no student has an inappropriate advantage over others
- the academic and ethical development of all students is fostered
- the reputation of the University for integrity in its teaching, research, and scholarship is maintained and enhanced.

Failure to uphold these principles of academic integrity threatens both the reputation of the University and the value of the degrees awarded to its students. Every member of the University community therefore bears a responsibility for ensuring that the highest standards of academic integrity are upheld.

University life can be very stressful. You have already paid for access to help in student fees, so please use the tools that you have at your disposal to ensure your best opportunity for a sound education.

Counseling, ADAP & Psychiatric Services (CAPS)

(848) 932-7884 / 17 Senior Street, New Brunswick, NJ 08901/ rhscaps.rutgers.edu/

CAPS is a University mental health support service that includes counseling, alcohol and other drug assistance, and psychiatric services staffed by a team of professional within Rutgers Health services to support students' efforts to succeed at Rutgers University. CAPS offers a variety of services that include: individual therapy, group therapy and workshops, crisis intervention, referral to specialists in the community and consultation and collaboration with campus partners.

Violence Prevention & Victim Assistance (VPVA)

(848) 932-1181 / 3 Bartlett Street, New Brunswick, NJ 08901 / vpva.rutgers.edu/

The Office for Violence Prevention and Victim Assistance provides confidential crisis intervention, counseling and advocacy for victims of sexual and relationship violence and stalking to students, staff and faculty. To reach staff during office hours when the university is open or to reach an advocate after hours, call 848-932-1181.

Disability Services

(848) 445-6800 / Lucy Stone Hall, Suite A145, Livingston Campus, 54 Joyce Kilmer Avenue, Piscataway, NJ 08854 / <https://ods.rutgers.edu/>

The Office of Disability Services works with students with a documented disability to determine the eligibility of reasonable accommodations, facilitates and coordinates those accommodations when applicable, and lastly engages with the Rutgers community at large to provide and connect students to appropriate resources.

Full disability policies and procedures are at <http://disabilityservices.rutgers.edu/>

Students with disabilities requesting accommodations must follow the procedures outlined at <http://disabilityservices.rutgers.edu/request.html>