11:216:471 Silviculture

3 Credits

CONTACT INFORMATION:

Instructor: Dr. Allyson Salisbury

Office Location: Old Blake 102

Phone: 1-848-932-4516   Email: asalis@sebs.rutgers.edu

Office Hours: By appointment for zoom or in-person

Meeting Times/Places

TBD

Required Textbook

- *Silviculture: Concepts and Applications* 3rd Ed. Ralph Nyland in collaboration with Laura S. Kenefic, Kimberly K. Bohn, and Susan L. Stout
- Additional reading materials will be posted on Canvas. These will be provided for reference and you may find them useful for the course projects.

Course Overview

Humans have depended on forests and their many benefits for our entire existence. Today, to make the most of these benefits and to ensure their long-term sustainability, we actively manage forests to guide their development and use. Silviculture is "the art and science of controlling the establishment, growth, composition, health, and quality of forests and woodlands to meet the diverse needs and values of landowners and society on a sustainable basis" (Dictionary of Forestry, 2008). We can think of silviculture as a toolbox full of management strategies. In this course, you will learn about the tools in this toolbox, how they work, and how to use them.

Specifically, by the end of this course, you will be able to:

- Describe and explain both foundational ecological concepts that inform silvicultural practices and the practices themselves
- Identify and develop objectives for silvicultural management that address the needs of land owners and society
- Create and defend silvicultural prescriptions that meet landowner and social objectives in the context of local and national laws and regulations in a manner consistent with professional ethics.

Expectations

        We will meet in-person for the duration of the semester. Attendance is mandatory except for excused absences (illness) or pre- approved needs. Students are expected to come ready for discussions and activities in class by having read the assigned reading materials for the week.

        We will go on several field trips for the class, both around campus and further away. We will do our outdoor activities regardless of the weather, unless Rutgers declares a weather emergency and closes campus. Learning to work outdoors in all types of conditions is important training for natural resource professionals. If you have questions about weather appropriate clothing, please let me know.

        We will have two Saturday field trips later in the semester to observe silviculture practices implemented in different parts of New Jersey.

        Whatever the prevailing health concern, we still need to take care of one another. Masks are welcome in the classroom. If a student feels ill, has a cough or fever, or a positive COVID test (without symptoms) their absence is excused and they need to stay home. However, even if a student is ill, they need to (1) report it online (https://sims.rutgers.edu/ssra/), (2) send an email to the instructor to inform them of their absence and (3) they remain responsible for making up missed work.

Assignments

Additional assignment details and deadlines will be posted on Canvas.

Quizzes (20% total)

There will be 10 quizzes on Canvas during the semester that will be due Thursday at midnight before class. These quizzes will cover material from the reading and class discussions. They are one way for me to track how well you're learning concepts in class and will let me know when I need to revisit topics that didn't click the first time.

Canvas Discussions (10% total)

There will be 5 discussion threads on Canvas where you will first post your response to a question, then you will comment on the response of one of your classmates. This exercise is meant to give you practice thinking and writing in silvicultural terms as well as engaging in conversation about topics that have no simple answer.

Field Trip Observations (5% total)

During field trips around campus and off-campus, we will always begin by taking 5-10 minutes to stop and record what we see in the woods. This is not formal data collection, but rather practice simply making observations and noticing the natural world. Such observations are valuable when making silvicultural recommendations.

Project 1: Evaluating Regeneration in Helyar woods (20%)

In this project, you will work in teams to evaluate current conditions in Helyar Woods at Rutgers Gardens to assess its potential to grow the next generation of trees. Based on your observations and concepts learned in class, you'll make recommendations for methods that could improve regeneration.

Project 2: Silviculture options for the Helyar Pines (20%)

The Helyar Pines is a beloved stand of white pines towards the northern end of Helyar woods. Damage from storms and pests has left the stand in poor condition. For each major silviculture practice we learn about, you will evaluate its applicability to the pine stand and explain why it would or would not be an appropriate choice.

Project 3: Writing a silviculture prescription (25%)
I will provide you with data previously collected for a forest stand and a set of landowner objectives. Your job will be to write a rationale silviculture prescription that meets goals for the site and is appropriate for the tree community.

Grading

Assignment	% Final Grade	Grade Assignment
Quizzes	20%	A = 100- 90%
Canvas Discussions	10%	B+ = 87.0-89.9%
Field Trip Observations	5%	B = 80.0% - 86.9%
Project 1	20%	C+ = 77.0- 79.9%
Project 2	20%	C = 70.0- 76.9
Project 3	25%	D = 69.9- 60%

Late Work Policy

Due dates for assignments, projects, and quizzes will be provided in the syllabus or posted on Canvas. Unless otherwise stated, assignments are due on those days. However, "life happens," so this course will offer you **three flex days** that you can use to extend a deadline without penalty for assignments, projects, and quizzes. To use a flex day, please email me **BEFORE the due date** and let me know how many flex days you would like to use, no explanation needed.

After your three flex days have been used up, an assignment/project/quiz that is submitted within 24 hours after the due date will automatically receive a 20% deduction of the grade. After 24 hours, the assignment/project/quiz will be worth zero points. I will evaluate extenuating circumstances, (e.g. hospitalization) that result in late work on a case-by-case basis.

Office Hours

Office hours are an open invitation to chat, grow, or learn. They represent a time to extend the classroom learning experience into an ongoing conversation. They are set time when the instructor will be available each week – no appointments needed. You can explore the class content more. You can ask for advice on your major or life after college. They are generally offered on a first-come, first-served basis. If you have class at the same time as office hours, you are welcome to make an appointment for a different time.

DEI Statement

I intend for this class to be a place where all students, regardless of background, feel welcomed, supported, and valued for their contributions. Our class community will respect all facets of a person's identity, including, but not limited to race, ethnicity, gender, sexual orientation, religion, age, disability,

social class, and nationality. Our unique identities serve to enrich our learning experiences as a class and should be valued as such. I am always learning how to be a more effective teacher and I welcome and encourage your suggestions as we move through the semester. You can submit feedback to me directly in-person or via email, or anonymously via Canvas.

Academic Integrity

The university's policy on Academic Integrity is available at https://academicintegrity.rutgers.edu/sites/default/files/pdfs/current.pdf. The principles of academic integrity require that a 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 impermissible materials or impermissible 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 ensure 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.

The use of Large Language Models has proliferated. While these power tools are undoubtedly useful and you should expect to use them once in the workforce, you'll be able to make the most out of them if you know what you are doing, first. Use of AI and AI tools such as ChatGPT is not permitted in class unless the use of an AI tool is explicitly part of the assignment.

Additional university resources

Rutgers has numerous resources available to help you get the most out of your time here and provide support. A list of relevant resources is posted on Canvas. And if what you're looking for isn't on that list, please talk to me and I'll do my best to connect you the right support.