

SILVICULTURE (FOR 3162C)

Course Syllabus- Spring 2015

INSTRUCTOR

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OFFICE HOURS

As an adjunct instructor I do not have a designated office or regular office hours. Despite this I want to be available to students for assistance and one on one instruction time. I am committed to student success and understanding of the course material. I will be available as much as possible before and after class for assistance. I am also willing to make office hours by appointment and will be available for assistance via email and phone. Requests for assistance via email or phone should be made prior to 8 p.m.

MEETING TIMES

Wednesday 5 – 8:00 pm, Room 4814
3 to 4 Saturday field labs totaling 30 hours

CREDIT HOURS

This is a 4 credit “C” course, which means there is a lab associated with this course.

Three credits of lecture = three hours of contact time per week

One credit of lab = a minimum of two hours of contact time per week

Total contact hours for a 15 week course = 75 hours;

45 hrs during regular Wednesday class time, 30 hrs distributed across 4 Saturday labs

PREREQUISITES

Prereq: FOR 3253C or PCB3034C, FNR 3131C or equivalent.

PURPOSE OF THE COURSE

Silviculture is the ‘art and science’ of creating and maintaining communities of trees to meet specific objectives on a sustainable basis. This course will cover the principles for establishing, tending, and regenerating stands in the context of various ecological, economic, and social considerations. Students will develop a broad understanding of the silvicultural concepts and applications needed to manage forest stands for a variety of commodity and non-commodity values. Some of the values to be addressed in this course include timber production, wildlife habitat, water quality, recreation, forest health, and ecosystem restoration. Emphasis will be placed on, but not limited to, silvicultural systems of the Southeast.

OBJECTIVES AND GOALS

By the end of the course, students should understand the following concepts and techniques:

- Effects of site and silvics on silvicultural systems
- Natural and artificial regeneration
- Site preparation (mechanical and herbicide treatments, prescribed fire)
- Even-aged silviculture (intermediate treatments and reproduction methods)
- Uneven-aged silviculture

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Upon successful completion of the course, the students will also be proficient in the following skills:

- Inventory forest stands using standard forestry equipment
- Develop treatment prescriptions
- Use excel and/or other computer programs to analyze forest inventories and make calculations
- Written communications

FORMAT

This is a 4-credit course, consisting of instruction in both the classroom and the field. This course emphasizes both concepts and skills. We will use the class meeting time for formal instruction including lecture/discussions and class activities, which will include practice scenarios (group discussion of silvicultural recommendations), calculations, or computer activities. Reading the chapters ahead of class is essential to prepare for the class lecture, discussion, and quizzes. It is recommended that you take notes on the assigned reading and bring them to class along with any questions and discussion topics.

The Saturday field labs will reinforce and strengthen concepts learned in class through observation of silvicultural systems on the landscape and through hands-on activities. During some labs we will observe and discuss silvicultural treatments in the field and/or meet with regional land managers. During other labs, we will additionally collect field data to be analyzed and presented. Labs will follow a tight schedule which will require students arrive on time and ready for field exercises. Proper field attire and protective equipment is required and will include closed toe 6-8 in. field boots, long pants, heavy shirts, and hard hats when appropriate.

REQUIRED MATERIALS

Nyland, R.D. 2002. *Silviculture: Concepts and Applications*. 2nd Edition. Waveland Press

Supplemental chapters and journal articles will be distributed by the instructor or posted online.

RECOMMENDED MATERIALS

Calculator, flash drive, laptop computer, notebook, clipboard, and foresters field notebook

ELECTRONIC COMMUNICATIONS

There is a CANVAS e-learning site available for this course. Lecture slides and other handouts will be posted by the class period, and should be used reviewed after lecture. It is my recommendation that students avoid the temptation to use the PowerPoints as a substitute for in class note taking. Additional handouts may be provided in class by the instructor. Most assignments will also be submitted via CANVAS unless otherwise noted. On occasion, I will send an announcement through CANVAS or by email regarding updates to the syllabus or clarifications of assignments.

EVALUATION AND PERFORMANCE CRITERIA

<u>Assignment</u>	<u>% of final grade</u>
Quizzes (11); lowest grade dropped	11
FVS exercises (4)	20
Lab Reports (4)	36
Exams (3)	33
Total	100

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Letter grades will be assigned as follows: A (93-100), A⁻ (90-92), B⁺ (86-89), B (83-85), B⁻ (80-82), C⁺ (76-79), C (73-75), C⁻ (70-72), D⁺ (66-69), D (63-65), D⁻ (60-62), E (<60)

A complete explanation of the UF Grading policies can be found at:

<http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html>

At the very minimum, the student is expected to attend class, complete all assignments on time, and be able to define the key concepts of forest ecology in lab reports, exams, and presentations. Evaluation of written and oral assignments will reward accuracy, thoroughness, clarity and organization. Grading “rubrics”, which describe requirements of the assignment, will be handed out prior to the due date. It is in your best interest to read and follow these instructions carefully.

Excuses for late work and absences—Assignments submitted electronically by 5 pm on the due date or on paper at the start of the class period are considered on time. After 5pm, late assignments will lose value at the rate of 20% each day (**weekend days count too!**). In cases of extended illness or family emergencies, arrangements to make up missed exams or turn in late assignments must be made with the professor *prior* to the due date.

Saturday field labs are mandatory and necessary to complete the lab report assignments. Students who intend to miss lab and have a valid excuse must contact the instructor at least 2 weeks in advance to make arrangements for an alternate assignment (typically a 5-8 page paper on the topic of the lab in addition to any calculations of data collected during that lab period). Students, who miss lab without prior arrangements, or notification within one day of the missed lab, will lose at least 50% of the lab report grade for that lab.

Policy on lateness to class- Late arrivals will not be tolerated. Students arriving more than 10 minutes into the class session will not be allowed to make up the quiz unless prior arrangements are made, and will not be allowed into the classroom until the next available session break.

DESCRIPTION OF ASSIGNMENTS

Quizzes

A brief quiz will be given at the start of the discussion portion of class. The quiz is intended to evaluate your comprehension of the reading material. The format may vary between short answer (3 sentences), matching, multiple choice, and/or definitions. Quiz questions typically come directly from the Reading Guides. The lowest quiz grade will be dropped.

Forest Vegetation Simulator (FVS) Exercises

We will use FVS model to simulate the effect of different silvicultural scenarios (e.g. thinnings and regeneration method) on the stand structure and other attributes. This unique program illustrates the results of silvicultural treatments and techniques over a long period of time. We will use it to illustrate the effects of management decisions on the forest stands and structure. Students will be allowed to design and run their own prescriptions and models in FVS for extra credit. The amount and requirements of the extra credit will be determined by the instructor and are at my sole discretion.

Lab Reports

Lab reports will include a summary of observations made and information presented during the Saturday labs, as well as calculations and silvicultural prescriptions based on a particular data set. Some data will be collected in the field, while other data sets will be handed out during class. We will work on calculations during the class period, and the formal report will address the following components: an introduction of the conceptual background of the silvicultural methods used, target values or objectives of the treatment, the site description (if applicable), ‘methods’ for devising the prescription (what data was collected, how it was analyzed, etc), results of any analysis, the silvicultural prescription, and intended

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outcomes. Grades will be based on the content of written material, accuracy of calculations when appropriate, and writing (grammar, structure, etc).

Exams

The exams are intended to evaluate your understanding of the conceptual material, and to demonstrate your critical thinking and problem solving skills in applying these concepts and techniques under a variety of landowner objectives. The format of the exam will consist of multiple choice, matching, true and false, fill in the blank, and short answer (3-4 sentences). In addition each exam will require 1 to 2 essays (1 -2 paragraphs) in which you will describe silvicultural recommendations in a variety of ‘scenarios’. The final exam is cumulative, but will primarily cover materials from the last third of the course.

SCHEDULE

Date	Discussion/Activities	Reading	Assignment Due
Week 1 1/4	Discussion - What is Silviculture? An introduction Activity – Prior skills form, student profiles	(Ch. 1, 2)	Quiz 1;
Week 2 1/11	Discussion- Natural and artificial regeneration Activity- regeneration scenarios; Silvics comp. activity	Ch. 4, 6	Quiz 2;
Week 3 1/18	Site Preparation and Competition Control Activity- Site Preparation scenarios; Post Planting Care	Ch. 5, Supp. rdgs	Quiz 3;
Sat 1/21	Lab 1- Overview of regeneration planning; Site prep/tree planting (RMS land or Blackwater)		
Week 4 1/25	Discussion- Nursery mangt, tree planting, dir. seeding Activity- Introduction to FVS computer program	Ch. 7, 8	Quiz 4;
Week 5 2/1	Discussion- Early stand development, release treatment Activity: scenarios, review for exam (quiz bowl)	Ch. 15, 16	Quiz 5; FVS Activity 1; Lab Report 1
Sat 2/4	Lab 2- Tree marking+ forest inventory for thinning, biomass harvesting (Blackwater River State Forest)		
<i>Week 6</i> <i>2/15</i>	<i>Exam 1 and Introduction to Thinning Concepts</i>		
Week 7 2/22	Discussion- Thinning Methods and Intensities Activity: Foam forests; FVS computer thinning activity	Ch. 17-18	Quiz 6;
Week8 3/1	Discussion- Thinning regimes Activity: FVS thinning Prescriptions	Articles- TBA.	Quiz 7; FVS Activity 2
Week 9 3/8	SPRING BREAK!		
Week 10 3/15	Discussion- Even-aged regeneration methods Activity: regeneration method scenarios; FVS activity	Ch. 13 and 14	Quiz 8; Lab Report 2
Week 11 3/22	Discussion- Plantation Management, Wood Products Activity: lab calculations; review for exam	Articles TBA	Quiz 9; FVS Activity 3
Sat 3/25	Lab 3- Plantation management Even-aged regen methods (Blackwater and RMS)		
<i>Week 12</i> <i>3/29</i>	<i>Exam 2 and Introduction to Multi-aged and Uneven-aged Concepts</i>		

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Week 13 4/05	Discussion Uneven-aged silviculture Activity-FVS (BDq and ProB)	Ch. 11-12	Quiz 10; Lab Report 3
4/15 or 4/22	Lab 4- Uneven-aged silviculture (Escambia Experimental Forest and Blackwater River State Forest)		
Week 14 4/12	Discussion- Conservation forestry Activity: tbd	Ch. 10, handouts	Quiz 11; FVS Activity 4
Week 15 4/19	Discussion- Salvage operations, forest health, BMP's Activity-tbd	Ch. 21, 22	Quiz 12; Lab Report 4
Week 16 4/26	Review Session; Silviculture Quiz Bowl		
5/3	<i>FINAL EXAM</i>		

CODE OF CONDUCT

All students are expected to abide by the Student Honor Code as described in the Student Handbook (<http://www.dso.ufl.edu/studentguide/studenthonorcode.php>). Students are expected to behave in a professional and courteous manner towards the instructors and other classmates.

Special note: Students are allowed to bring laptops, tablets, and cell phones in class as a note taking and learning tool only. Electronic devices must be silenced at all times and must not distract other students. Use of electronic devices for non-class related functions is prohibited and will result in the loss of your ability to use these devices in class.

Finally, plagiarism is taken very seriously at this institution, and can result in a reduced grade, failure of the course, and possible dismissal from the college. Plagiarism includes: 1) the direct use of any written material (**including internet sites!!**) without proper quotations and citation or 2) *the submission of a document, in part or wholly authored by someone other than the student*. Please take special caution when reviewing and summarizing a journal article or book that your words are your own. If you are not sure what constitutes plagiarism, please come see me. It is up to the professor to evaluate the severity of any infraction and to determine the disciplinary action to be taken. The student should also be aware of his/her legal rights as defined in the Student Honor Code.

UNIVERSITY SERVICES

You have full access to all the student services available through the University of Florida, including:

[Disability Resource Center](#) : Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation

University Counseling Center, <http://www.counsel.ufl.edu/> ,310 Peabody Hall, 352-392-1575, personal and career counseling

Student Mental Health, Student Health Care Center, <http://shcc.ufl.edu/smhs/> ,352-392-1171, personal counseling

Sexual Assault Recovery Services, Student Health Care Center, <http://shcc.ufl.edu/care/>,352-392-1161, assault recovery counseling

Career Resource Center, <http://www.crc.ufl.edu/>, Reitz Union, 352-392-1601, career development assistance and counseling

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2. Student Complaint Process- The following link provides information on the process of filing a complaint about a course:

https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf.

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. These evaluations are conducted online at <https://evaluations.ufl.edu>. Evaluations are typically open for students to complete during the last two or three weeks of the semester; students will be notified of the specific times when they are open. You will have an opportunity to complete evaluations during the class period on the last day of class. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results>.