

SPRING 2018
(3 Credit Hours)
Semester Syllabus

This syllabus provides a tentative schedule and the best summarizations of course policies to date. This schedule and policies may require further clarification or it may be necessary to change them. If there is to be a change, it will be announced in lecture and you will be notified by email.

Course Instructors:

Dr. H. Alexis Londo

Director for the Applied Geospatial Analysis and Remote Sensing Outreach Program

Londo.4@osu.edu

373C Kottman Hall (614)247-6099

Webpage: <http://senr.osu.edu/our-people/alexis-londo>

Times and Location:

You will be required attend 2 Saturday activities. One will be a logging operation with a portable sawmill for no longer than 2 hours one Saturday (yet to be determined) and the second will be a tour of a sawmill (transportation provided) if it can be scheduled for a Saturday.

Student Learning Goals:

1. Demonstrate understanding of forest ecology and biology as applied to wood characteristics;
2. Demonstrate understanding and competency of forest resource policy, economics, and administration as applied to wood product markets.
3. Demonstrate understanding and competency in oral and written communication skills.

Expected Learning Outcomes:

Upon successful completion of this course, the student will:

1. Understand macroscopic and microscopic character and structure of wood, as well as differences between hardwood and softwood structure
2. Understand and be able to quantify wood measurements like density, strength, and mechanical properties.
3. Understand how wood is utilized, how forest products are manufactured, marketed, and valued.
4. Have demonstrated competency in oral and written communication skills.

Specific Learning Outcomes:

1. Students understand the nature of spatial information of the environment
2. Students explore various technologies for data acquisition and organization
3. Students learn about important spatial information forms and representations
4. Students examine the role of spatial information and systems in understanding and managing natural resources
5. Students learn about methods for assessing environmental change.

Useful Web Resources:

LumberMarketing: <http://honeybee.helsinki.fi/mmekn/fpm/vt/index.htm>

WoodHandbook: <http://www.fpl.fs.fed.us/documnts/fplgtr/fplgtr113/fplgtr113.htm>

Great Hardwood ID Site: <http://legacy.ncsu.edu/WPS202/aaJosh/Homepage.htm>

Good Wood ID Site: <http://www.cefts.org/woodwebpage.pdf>

Good Wood ID Site: <http://www.utextension.utk.edu/publications/pbfiles/PB1692.pdf>

Periodic Table: <http://www.webelements.com/>

Required Textbooks:

Shmulsky, R and P. D. Jones, 2011. Forest Products and Wood Science, An Introduction, 6th Edition, Wiley-Blackwell, Chichester, West Sussex, UK

Supplemental References:

Panshin, A. J., and C. de Zeeuw, 1980. Textbook of Wood Technology, 4th ed, McGraw- Hill Book Company, New York.

Required Material:

10x handlens for laboratory sessions

Useful Material:

SHARP knife or razor blade holder for surfacing wood blocks.

Assessment Format:

The course will be assessed using performance on quizzes, homework, exams, a comprehensive final exam, and laboratory reports/assignments. The quizzes can encompass lab and lecture material. Most lab sessions will involve an assignment to complete and turn in at the end of lab or at a later lab session as indicated by the lab instructor; most will be submitted online. **Attendance at both the lecture and laboratory is mandatory. Unexcused lab absences will result in a 25% reduction in the week's assignment.** Excused absences must be taken care of before the absence (when possible) by email. Each student will be allowed to make up one EXCUSED absence (sickness, death in family etc.) without penalty. The final is comprehensive.

Important Dates: Exam dates will be determined in class.

Task Points % of Grade:

Participation	30%
Lab (ID Quizzes/Participation)	30%
<u>Lecture/Assignments/Participation</u>	<u>40%</u>
TOTAL	100%

The grading scale is 93 - 100 (A) 90 - 92.9 (A-) 87 - 89.9 (B+) 83 - 86.9 (B) 80 - 82.9 (B-) 77 - 79.9 (C+) 73 - 76.9 (C) 70 - 72.9 (C-) 67 - 69.9 (D+) 60 - 66.9 (D) Below 60 (E)

****** You must have a passing average on homework, quizzes, and labs (combined for 45% of your grade-average), in addition to a passing average on exams (the other 55% of your course) in order to pass the course! If you have a failing average for one of these categories you will fail the class.**

Assignments are due at the beginning of class or lab period. Late assignments will result in a 10% reduction in possible points from which to start the grading for each day the assignment is late. You must have email consent from the instructor to turn in assignments late without penalty. This must be dated before the assignment is due. Late assignments will only be accepted up to 7 days after the date for which the assignment was originally due.

If you will be unable to take an exam, arrangements to make up an exam must be made by email at least 3 days prior to the exam and be documented by email confirmation. If you miss an exam and have not made arrangements before the exam period you will not be able to make up the missed exam except in extreme circumstances and with the approval of the professor.

You must have a passing average for your exams and for your labs to pass this class.

Academic Misconduct: Academic misconduct (plagiarism, cheating, and other forms of misconduct as defined by the university) will not be tolerated. According to Faculty Rule 3335-31-02, academic misconduct is defined as any activity that tends to compromise the academic integrity of the institution or subvert the education process. Please see the Student Resource Guide or instructor if you have further questions.

Special Needs: If you have a disability that requires accommodations please make an appointment with me as soon as possible (preferably the first week of the semester) to make arrangements as necessary. Please also coordinate with the OSU Office of Disability Services (<http://www.ods.ohio-state.edu>, 614-292-3307).

Take Care of Yourself: A recent American College Health Survey found stress, sleep problems, anxiety, depression, interpersonal concerns, death of a significant other, and alcohol use among the top ten health impediments to academic performance. Students experiencing personal problems or situation crises during the semester are encouraged to contact the OSU Counseling and Consultation Service (<http://www.ccs.osu.edu>; 614-292- 5766) for assistance, support, and advocacy. This service is free and confidential.

Course Outline and Schedule:

Please note that the lecture and laboratory topics are subject to change depending on our progress through the lecture material and the laboratory exercises. In particular, some laboratory exercises may take more than 1 session to complete.

Lecture Topic	LabTopic
1 Introduction, Tree Growth	Introduction, Tree Growth
2 Composition and Structure of Wood	Macroscopic Wood Features and softwood identification
3 Juvenile Wood, Reaction Wood, Branches & Roots	Composition and Structure; softwood identification
4 Bark	Wood Composition and Structure; softwood id.
5 Wood and Water	Softwood Structure; Microscopic features of softwoods
6 Density and Specific Gravity	Wood Strength and Mechanics
7 Wood Durability and Protection	Wood Strength and Mechanics Lab
<i>Spring Break – Self Directed Study</i>	
8 Silviculture and Wood Quality	Wood Structure Report Due Macroscopic features of hardwoods and hardwood identification
9 Lumber – specifications and how it is produced (several wood product mill videos)	Macroscopic features of hardwoods and hardwood identification
10 Structural and Nonstructural Panels	Hardwood Structure; Microscopic features of hardwoods and
11 Composite Lumber Products	Tropical and Exotic Hardwoods;
12 Pulp and Paper	Microscopic features of hardwoods and identification
13 Energy and Chemical Products; Global Wood Market; Ethics and Policy	

THERE WILL BE A MANDATORY SATURDAY LAB TO GO AND TOUR 2 SAWMILLS AND VISIT A WOOD PRODUCTS COMPANY (CABINET MAKER, FURNITURE MAKER, EXOTIC WOODS OUTLET). The date for this will be announced by Feb 15 and will take place late March or early April.