FOR 3430C
Forest Mensuration

Spring 2013

PREREQUISITE FNR 3410C or equivalent

INSTRUCTOR
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TEACHING ASSISTANT
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LECTURE TIME
Tuesday: Period 4 (10:40 am – 11:30 am) – NZH 222
Thursday: Periods 8 (3:00 pm – 3:50 pm) – NZH 222

LABORATORY TIME Friday: Periods 9-E1 (4:05 pm – 8:10 pm) – NZH 222

CLASS WEBSITE https://lss.at.ufl.edu/

COURSE DESCRIPTION Forest resource measurements, log and tree content estimation, forest inventory techniques, and stand growth and yield.

COURSE OBJECTIVES Train students on aspects of principles of forest mensuration and their applications to estimate forestry resources. Some of the topics covered include: individual and stand level volume estimation, natural resources inventories, sampling design, basic statistical principles, and growth and yield models. The course is strongly based on field activities with emphasis on volume estimation.

REQUIRED TEXT Husch, B., T.W. Beers, and J.A Kershaw, Jr. 2003. Forest Mensuration. 4th ed. John Wiley & Sons, Hoboken, NJ. 456 p. ISBN: 0471018503.

OPTIONAL TEXT Avery, T.E. and H.E. Burkhart. 2002. Forest Measurements. 5th ed. McGraw-Hill, New York, NY. 456 p. ISBN: 0073661767.

EXAMS There will be 3 exams and a final exam. These will be implemented outside of normal classes hours from 5:10 to 7:10 pm. The final exam will be comprehensive with greater emphasis in later/newer material. Each exam will be worth 100 points. Exams are closed book and you will need a calculator. *No make-up exams will be given under ANY circumstance!*

EXAM DATES

Exam 1 (3:00 pm – 4:00 pm)	January 31st (Thursday)
Exam 2 (3:00 pm – 4:00 pm)	February 28th (Thursday)
Exam 3 (3:00 pm – 4:00 pm)	April 04th (Thursday)
Final Exam (10:40 am – 11:40 am)	April 30st (Tuesday)

HOMEWORK

There will be 7 assignments. Each will be worth 20 points. However, the last homework will be the final report and it is worth 40 points. Homework is due at 10:40 am on Tuesdays (right before class) and should be presented ON PAPER (i.e. not electronically). *Late homework will NOT be accepted!* Students may work together in groups, but the report for each homework must be presented individually.

HOMEWORK DATES

Homework 1 (20 pts)	January 22th
Homework 2 (20 pts)	February 05th
Homework 3 (20 pts)	February 19th
Homework 4 (20 pts)	March 12th
Homework 5 (20 pts)	March 26th
Homework 6 (20 pts)	April 9th
Homework 7 (40 pts)	April 23th

LAB ASSIGNMENTS

There will be a total of 8 laboratory assignments, each will be 5 points, and they will consist on a few questions related to the actual laboratory activities. The assignments questions are due at 10:40 am on the following Tuesday, and they will be worked and presented as a crew.

LECTURE SCHEDULE (Tentative)

Week	Topics	Chapter	Activity
1	Principles of Measurement	2	-
2	Individual Tree Parameters	5	-
3	Determination of Tree Volume and Wright	6 / 7	HW1
4	Stand Parameters	8	Exam 1
5	Measurement of Primary Forest Products	9	HW 2
6	Statistical Concepts	3	-
7	Sampling Units	11	HW 3
8	Forest Inventory: Part I	12	Exam 2
9	**SPRING BREAK**	-	-
10	Forest Inventory: Part II	12	HW 4
11	Sampling Design in Forest Inventories	13	-
12	Sampling with Varying Probability	14	HW 5
13	Growth of a Tree	15	Exam 3
14	Stand Growth and Yield Models	16	HW 6
15	Non-timber Forest Vegetation Parameters	10	-
16	Review	-	HW 7

LABORATORY SCHEDULE (Tentative)

Week	Date	Topics	Place
1	11-Jan	**Lab 1**: Tree Content Estimation.	NATL
2	18-Jan	**Lab 2**: Complete Enumeration and Systematic Techniques.	NATL
3	25-Jan	**Lab 3**: Descriptive Cruising.	ACMF
4	1-Feb	**Lab 4**: Variable and Fixed Area Plot Cruising.	NATL
5	8-Feb	**Lab 5**: Fixed Area Plot Inventory / Field Work.	ACMF
6	15-Feb	**Lab 6**: Variable Area Plot Inventory / Field Work.	ACMF
7	22-Feb	**Lab 7**: Fixed and Variable Area Plot Inventory / Data Processing.	NZH
8	1-Mar	**Lab 8**: Small Vegetation Inventory	ACMF
9	8-Mar	**SPRING BREAK**	-
10	15-Mar	**Lab 9**: Processing Inventory Data.	NZH
11	22-Mar	**Lab 10**: Inventory Project.	ACMF
12	29-Mar	**Lab 11**: Inventory Project.	ACMF
13	5-Apr	**Lab 12**: Inventory Project.	ACMF
14	12-Apr	**Lab 13**: Inventory Project.	ACMF
15	19-Apr	**Lab 14**: Inventory Project.	ACMF

ATTENDANCE

Laboratory/Field attendance IS mandatory, and only medical excuses will be accepted. Lecture attendance is not obligatory, but success in the class (together with eligibility of bonus points and/or curving) depends, and it will depend, on attendance. In addition, some topics relevant for exams and homework that are not included in slides will be presented during class.

GRADING

Grades will be based on a total of 600 points, with 400 points (i.e. 2/3) coming from exams, 160 from homework and 40 points from laboratory assignments. The following are the letter grades considered and their corresponding ranges

A (571-600)	C (441-460)
A- (541-570)	C- (421-440)
B+ (521-540)	D+ (401-420)
B (501-520)	D (381-400)
B- (481-500)	D- (361-380)
C+ (461-480)	E (0-360)

COMPUTER USE

You will need a computer for most of the homework assignments. Basic software, such as MS Excel and Word is recommended. Other software, will be available on the IFAS laboratory (McCarty Hall B 3086).

WARNING

This class will expose you to new and challenging mathematical topics that could require additional dedication and study. In addition, some field activities could expose you to challenging environments. For a good, and safe, performance in this class it is necessary that you are self-motivated,

independent, and that you observe safety and proper planning at all times. Some of the expectations from the instructor from you are:

Be prepared for class. Students who perform well in this class place a high priority on attendance, taking good notes, completing assigned readings and laboratory reports in a timely and accurate fashion, and actively participating by asking questions or providing comments on the topics being discussed.

Respect the formal learning environment. This includes arriving and leaving on time, shutting off cell phones and other electronic devices while in class, being open to the opinions and ideas of others, and working effectively and professionally in the field.

FIELD REQUIREMENTS

Appropriate field gear, including heavy pants and boots, IS MANDATORY for this class in order to participate in field labs. Individuals not properly equipped will not be allowed to participate. (University Insurance covers only properly outfitted individuals.)

Irresponsible and careless acts in the field will result in exclusion from future field activities. Many field activities are conducted on non-University land, and full respect of these land-owners property and rights is required. Smoking in the woods is prohibited.

INVENTORY PROJECT

The inventory which will be conducted corresponds to a "real-world" inventory assignment. Inventory field work and data summarization (including laboratory assingments) will be done on a crew basis, but homeworks and inventory project (i.e. HW 8) will be prepared and presented individually.

CREW COMPOSITION

Some field activities will be conducted using a two (and exceptionally a three) person crews. Crews will be assigned in the first lab and could be reassigned periodically for the remaining activities.

Each individual will need a diameter tape and/or loggers tape, compass, prism, and leggings. Each crew/individual is responsible for aerial photos and equipment received from the SFRC, and it is their responsibility to bring this material to each of the field laboratories. An individual or crew who loses or damages an item will be asked to replace it.

UNIVERSITY POLICIES

Academic Dishonesty: All members of the University Community share the responsibility to challenge and make known acts of apparent academic dishonesty. Acts of academic dishonesty will not be tolerated and will be referred to the Student Honor Council.

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 the University policies and rules, disciplinary action will be taken as appropriate.

University support services: Resources are available on-campus for students having personal problems or lacking clear career and academic goals which interfere with their academic performance. These resources include:

1. University Counseling Center, 301 Peabody Hall, 392-1575, personal and career counseling
2. Student Mental Health, Student Health Care Center, 392-1171, personal counseling
3. Sexual Assault Recovery Services, Student Health Care Center, 392-1161, sexual counseling
4. Career Resource Center, Reitz Union, 392-1601, career development assistance and counseling

Accommodations for students with disabilities: 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. If you have a documented disability and wish to discuss academic accommodations, please CONTACT ME as soon as possible.