

# FOR 6934

## Forest Mensuration

Spring 2012 (T Periods 4-5, W Periods 6-9)  
Sections 4213

<b>PREREQUISITE</b>	FNR 3410C or equivalent
<b>INSTRUCTOR</b>	Dr. Salvador A. Gezan Office: 363 Newins-Ziegler Hall Phone: (352) 846-0133 E-mail: <a href="mailto:sgezan@ufl.edu">sgezan@ufl.edu</a> Office hours: Wednesday 10:00 am - 12:00 pm (or by appointment).
<b>TEACHING ASSISTANT</b>	TBA Office: TBA Email: TBA Office hours: TBA
<b>LECTURE TIME</b>	Periods 4-5 (10:40 am – 12:35 pm)
<b>LABORATORY TIME</b>	Periods 6-9 (12:50 pm – 4:55 pm)
<b>CLASS WEBSITE</b>	<a href="https://lss.at.ufl.edu/">https://lss.at.ufl.edu/</a>
<b>COURSE OBJECTIVES</b>	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.
<b>REQUIRED TEXT</b>	Avery, T.E. and H.E. Burkhardt. 2002. Forest Measurements. 5th ed. McGraw-Hill, New York, NY. 456 p. ISBN: 0073661767.
<b>OPTIONAL TEXT</b>	Husch, B., T.W. Beers, and J.A Kershaw, Jr. 2003. Forest Mensuration. 4th ed. John Wiley & Sons, Hoboken, NJ. 456 p. ISBN: 0471018503.
<b>EXAMS</b>	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. <i>No make up exams will be given under ANY circumstance!</i>
<b>EXAM DATES</b>	Exam 1 (5:10-7:10 pm)                      February 07 <sup>th</sup> (Tuesday) Exam 2 (5:10-7:10 pm)                      March 13 <sup>th</sup> (Tuesday) Exam 3 (5:10-7:10 pm)                      April 17 <sup>th</sup> (Tuesday) Final Exam (5:10-7:10 pm)                May 01 <sup>st</sup> (Tuesday)

## HOMEWORK

There will be 8 assignments. Each will be worth 20 points. Homework is due at 10:40 pm on Tuesdays (right before class) and should be presented ON PAPER (i.e. not electronically). *Late homework will NOT be accepted!* Homework assignments will be worked and presented individually, but these can be worked on pairs.

## HOMEWORK DATES

Homework 1	January 17 <sup>th</sup>
Homework 2	January 31 <sup>st</sup>
Homework 3	February 14 <sup>th</sup>
Homework 4	February 21 <sup>st</sup>
Homework 5	February 28 <sup>th</sup>
Homework 6	March 20 <sup>th</sup>
Homework 7	April 3 <sup>rd</sup>
Homework 8	April 24 <sup>th</sup>

## 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 5:00 pm on Wednesdays (right at the end of the laboratory), and they will be they will be worked and presented as a crew.

## LECTURE SCHEDULE (Tentative)

Week	Date	Topics	Chapter	Activity
1	10-Jan	Units of measure. Inventory types and designs. Sampling		-
2	17-Jan	Cruising Procedures.		HW 1
3	24-Jan	Log Content Estimation. Tree Content Estimation.		-
4	31-Jan	Tree Content Tables/Equations.		HW 2
5	7-Feb	Stand and Stock Tables.		Exam 1
6	14-Feb	Comparison of Inventory Methods.		HW 3
7	21-Feb	Tree growth.		HW 4
8	28-Feb	Inventory Planning/Conduct.		HW 5
9	6-Mar	<b>SPRING BREAK</b>	-	-
10	13-Mar	Remote sensing.		Exam 2
11	20-Mar	Site Productivity. Site Index.		HW 6
12	27-Mar	Stand Structure. Yield Tables.		-
13	3-Apr	Yield Tables.		HW 7
14	10-Apr	Stand Growth.		-
15	17-Apr	Growth Inventories		Exam 3
16	24-Apr	Course Review		HW 8

## LABORATORY SCHEDULE (Tentative)

Week	Date	Topics	Place
1	11-Jan	<b>Lab 1:</b> Variable and Fixed Area Plot Cruising.	AMCF
2	18-Jan	<b>Lab 2:</b> Variable and Fixed Area Plot Analyses. Computers/Software.	AMCF
3	25-Jan	<b>Lab 3:</b> Computers/Software. Dendrometry.	GNV
4	1-Feb	<b>Lab 4:</b> Tree Content Estimation.	GNV
5	8-Feb	<b>Lab 5:</b> Tree Content Estimation.	GNV
6	15-Feb	<b>Lab 6:</b> Complete Enumeration and Systematic Techniques.	AMCF
7	22-Feb	<b>Lab 7:</b> Complete Enumeration and Systematic Analyses.	GNV
8	29-Feb	<b>Lab 8:</b> Remote Sensing, GIS, GPS; Presentations.	GNV
9	7-Mar	<b>SPRING BREAK</b>	-
10	14-Mar	<b>Lab 9:</b> Inventory Project.	AMCF
11	21-Mar	<b>Lab 10:</b> Inventory Project.	AMCF
12	28-Mar	<b>Lab 11:</b> Inventory Project.	AMCF
13	4-Apr	<b>Lab 12:</b> Inventory Project.	AMCF
14	11-Apr	<b>Lab 13:</b> Inventory Project.	AMCF
15	18-Apr	<b>Lab 14:</b> Inventory Project.	AMCF
16	1-May	<b>Final Exam</b>	GNV

### ATTENDANCE

Laboratory 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 Excell and Word is recommended. Other software, will be available on the IFAS laboratory (McCarty Hall B 2103).

## **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 assignments) 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.