

FOREST MEASUREMENTS I (FRSC 2225)

Credit Hours: 2

Dr. R. W. Brown

Prerequisites: MATH 1002 (or MATH 1101)

Textbook: Forest Measurements, 5th Edition
Avery & Burkhart

Supplies: Calculator; highlighter pen; 3-ring binder

Grades:	<u>Points</u>
Two lecture exams	400
Final exam	350
Lab exercises	150
<u>Quizzes</u>	<u>100</u>
Total	1000

<u>Grade</u>	<u>Points</u>
A	900-1000
B	800-899
C	700-799
D	600-699
F	<600

Learning

Outcomes: Upon completion of this course, the student should be able to demonstrate competency in the following forestry skills:

1. Determination of tree diameters using the D-tape and tree calipers.
2. Determination of tree heights using the clinometer.
3. Computation of cubic foot, cord and board foot volumes of logs.
4. Conversions between various timber weight and volume units.
5. Determination of tree age and dbh growth rate using an increment borer.
6. Determination of stand density with a wedge prism.
7. Use of hand compass/pacing for sample plot location and traversing areas.
8. Determination of timber stand volumes using the complete tally, strip and line-plot cruising methods.

Note: These outcomes will be achieved through classroom lectures and hands-on laboratory exercises, primarily conducted outdoors.

Dr. R. W. Brown

08/17/09

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Text: Forest Measurements (5th Ed.), Avery & Burkhart

COURSE OUTLINE

- I. INTRODUCTION TO MEASUREMENTS (Chp. 1)
 - a. Uses of forest inventory information
 - b. Cost considerations
 - c. Abbreviations

- II. FOREST PRODUCTS MEASUREMENTS (Chps. 5 & 6)
 - a. Cubic volume
 - b. Cord measure
 - c. Weight scaling of pulpwood
 - d. Board foot volume
 - e. Overrun
 - f. Stick scaling of sawlogs
 - g. Weight scaling of sawlogs

*** EXAM 1**

- III. MEASURING STANDING TREES (Chp. 7)
 - a. Tree diameters
 - b. Tree heights
 - c. Tree form
 - d. Tree age

- IV. VOLUMES AND WEIGHTS OF STANDING TREES (Chp. 8)
 - a. Types of volume and weight tables
 - b. Construction of volume and weight tables

V. FOREST INVENTORY (Chp. 9)

- a. Classification of inventories
- b. Tree tallies
- c. Complete tree tally
- d. Cruise summaries
- e. Timber volumes from stump diameters

VI. INVENTORIES WITH SAMPLE STRIPS OR PLOTS (Chp. 10)

- a. Strip system
- b. Line-plot system
- c. Permanent sample plots
- d. Regeneration surveys

*** EXAM 2**

VII. SITE, STOCKING AND STAND DENSITY (Chp. 15)

- a. Site index
- b. Stand density
- c. Tree growth

*** FINAL EXAM**

ADDITIONAL COURSE INFORMATION

INSTRUCTOR:

Dr. R. W. Brown
Room 123, Yow F/W Bldg. (*office hours are posted by door*)
Phone: 391-4795
E-Mail: rbrown@abac.edu

ATTENDANCE:

Students are expected to attend every class meeting. If absent, it is the student's responsibility to obtain the information that was missed. Make-up quizzes and exams will only be given when an absence is excused in advance by the instructor, or when the absence is due to a medical emergency. Make-up of lab exercises will usually be impossible. Class attendance records will be kept by means of seating chart. **Students having more than two (2) unexcused absences will receive a grade of "F" for the course. Final determination of what constitutes an excused absence rests completely with the instructor.** Students penalized for excessive absences may appeal through the grade appeal process, as stated in ABAC's college catalog and student handbook.

CONDUCT:

The following rules of conduct shall govern the behavior of all students in this course. Failure to observe these rules may result in dismissal from this course.

No eating or drinking is allowed in the classroom or indoor lab areas.

No smoking or other use of tobacco is allowed in the classroom, indoor lab areas, or in college vehicles used to transport students to field labs. **No smoking is allowed during field labs without the instructor's permission.**

Students must wear appropriate clothing during field lab exercises as announced in advance by the instructor.

Students are expected to conduct themselves in a mature and safe manner. No dangerous actions or activities will be tolerated.

Note:

Dates of scheduled examinations and field trips, and due dates for projects and reports will be announced in class well in advance.

08/17/09