FOR 274: Forest Measurements and Inventory

Lecture 1
Class Overview
- Who We Are
- Why Are We Here
- What to Measure
- Course Outline
- Expectations

Lecture 1: Introduction to Forest Mensuration

"When you measure what you are speaking about and express it in numbers, you know something about it, but when you cannot (or do not) measure it, when you cannot (or do not) express it in numbers, your knowledge is of a meager and unsatisfactory kind."

Lord Kelvin

Lecture 1: Introduction to Forest Mensuration

"Forest mensuration deals with the study of the volume of logs, trees, and stands, and with the study of increment and yield."

Henry B Graves (1906)

Lecture 1: Introduction to Forest Mensuration

The horizons of forestry have expanded to include other natural resource concerns and problems, including wildlife, fires and fuels, recreation, etc.

The study of mensuration must also change to meet these new demands.
Managers are faced with many decisions:
What treatments to use, When to thin and when to burn, What is
the value of a potential sale, what are the potentials for
recreation, wildlife, carbon storage, etc.

Information is needed to answer such questions:
This information should be quantitative and have the same
meaning in other environments and to other people.

Forest measurements provide managers with quantitative data
to enable reliable (and defensible) decision making.

Husch, Beers, and Kershaw
Different Management Objectives:

Fires and Fuels

Regeneration (Rodeo-Chediski Fire)

USFS – Flagstaff Office

An AmericaFlux Tower

Saw-whet owl by Virgil Scott (1977)

Different Management Objectives:

Carbon & Water Processes

Recreation

Wildlife
Lecture 1: Introduction to Forest Mensuration

Course Overview
- Introduction Material
- Measurement Principles
- Land Area and Distance Measures
- Individual Tree Measures
- Sampling Methods
- Stand Measurements
- Natural Resource Measurements

Before We Begin: Essential Equipment
- Hard Hat
- Clipboard
- Compass
- Thinking Cap

End of Course Goal:
1-Page Laminated Field Cheat Sheet

Lecture 1: Lecture Format and Expectations
For Each Section:
- Lectures – Tues/Thurs 9:30 - 10:20 CNR 10
- Office Hours – Tues 1:30 - 4:30 Phinney B12
Section 1:
- Tutorial – Tues 10:20 - 10:45 CNR 10
- Lab – Thurs 1:30 - 4:20 CNR 26
Section 2:
- Tutorial – Thurs 10:20 - 10:45 CNR 10
Lab – Fri 1:30 - 4:20 CNR 26

Lecture 1: A Note on Tutorials
An assignment from Each Lab will be DUE at the next tutorial. You must hand in the assignment to me to attend the tutorial. This is your time to ask Questions or make comments about problems or any other aspect of the class. The grading done by my TA are correct and final.
Some Parting Thoughts:

"The continued need for forestry personnel with imagination and inventiveness is clearly apparent."

*Avery and Burkhart*

"Imagination is more important than knowledge: Knowledge is limited, imagination encircles the world."

*Albert Einstein*