

# Course Syllabus

**Department:** Environmental Conservation and Horticulture

**Date:** January 25, 2014

## I. Course Prefix and Number: CON 244

**Course Name:** INTRODUCTION TO FOREST MEASUREMENTS

**Credit Hours and Contact Hours:** 3 credit hours and 4 contact hours

**Catalog Description including pre- and co-requisites:** Introduction to Forest Measurements is a course designed to train students on the use of forest measuring equipment and the implementation of standard forest measuring procedures. Some of the topics covered include: basic tree identification, forest resource sampling designs, individual and stand level density and volume estimation techniques, as well as growth and yield models. The course is strongly based on field activities. (also listed as FOR 244)

## Relationship to Academic Programs and Curriculum including SUNY Gen Ed designation if applicable:

Introduction to Forest measurements is an elective course for the AAS Natural Resources Conservation, AAS Natural Resources Conservation Law Enforcement, AS Environmental Studies.

## II. Course Student Learning Outcomes:

The student will

1. Accurately measure individual trees and logs using a variety of measuring instruments.
2. Demonstrate competence in using a handheld compass.
3. Demonstrate an understanding of the theory of land surveying.
4. Demonstrate the ability to work with peers.
5. Demonstrate the ability to establish forest inventory plots according to given protocols.
6. Demonstrate the ability to manage data both in the field and using computer programs.
7. Demonstrate the ability to collect, summarize, analyze, and present data.

**College Learning Outcomes Addressed by the Course:** (check each College Learning Outcome addressed by the Student Learning Outcomes)

- |  |   |
|--|---|
| <input type="checkbox"/> writing             | <input checked="" type="checkbox"/> computer literacy |
| <input type="checkbox"/> oral communications | <input type="checkbox"/> ethics/values                |
| <input type="checkbox"/> reading             | <input type="checkbox"/> citizenship                  |
| <input type="checkbox"/> mathematics         | <input type="checkbox"/> global concerns              |
| <input type="checkbox"/> critical thinking   | <input type="checkbox"/> information resources        |

## III. Assessment Measures (Summarize how the college and student learning outcomes will be assessed):

For each identified outcome checked, please provide the specific assessment

*measure.*

List identified College Learning Outcomes(s)	Specific assessment measure(s)
Computer Literacy	Application of forestry-specific computer programs will be evaluated using an established technical report rubric.
Professional Competency	Proficiency and competence in the use of specific forestry equipment will be assessed in field practical examinations and the ability to accurately summarize field data will be assessed using an established technical reports rubric.

#### **IV. Instructional Materials and Methods**

##### **Types of Course Materials:**

Textbook, outside readings, forestry equipment

##### **Methods of Instruction (e.g. Lecture, Lab, Seminar ...):**

Lecture as well as in-class and field experiences

#### **V. General Outline of Topics Covered:**

Introduction to map and compass.

Forest inventory Planning and implementation

Estimating volume of standing trees : DBH, height, volume, weight.

Use of Standard forestry equipment: Biltmore cruiser stick, D-tape, clinometer.

Grading defects and deductions of standing trees and logs

Fixed area plots and calculations

Variable plot radius theory and practice, limiting distances.