

Course Objectives/Course Outline
Spokane Community College

Course Title: Forest Inventory

Prefix and Course Number: NATRS 216

Course Learning Outcomes:

By the end of this course, a student should be able to:

- Determine the appropriate number of cruise plots and their placement.
Locate plot centers accurately in the field within ½ chain of the intended location.
Locate and gather field data for fixed radius plot cruises (FRP) to USFS check cruise specifications.
- Compute gross and net volumes, percent defect and cruise statistics from FRP) cruises.
- Locate and gather field data for variable plot cruises (VP) using volume (measure) and tally (count) plots.
Computer gross and net volumes, percent defect and statistics from VP data.
Use cruise data from both FRP and VP cruises to determine other stand characteristics such as basal area, daba, trees per acre and stem spacing.
Measure and evaluate 3-P cruise data
Use field data recorders to gather data
Use the computer to evaluate field data and to write cruise reports.
Apply forest inventory skills to complete a service learning project for Turnbull Wildlife Refuge.

Course Outline:

Units:

- I. Review of Measurements and Statistics
 - A. Single Tree Measurements
 - B. Computing volumes, gross and net
 - C. Sampling designs
 - D. Measures of Central Tendency
 - E. Measures of Variability
 - F. Measures of Precision
 - G. Determining sample size
- II. Basic Concepts in Cruising and Inventory
 - A. Differences between cruises and inventories
 - B. Types of Cruises
 - C. Plot Spacing and Layout
- III. Fixed Radius Plot Cruising
 - A. Concepts
 - B. Tallies
 - C. Computing cruise volumes
 - D. Computing stand characteristics
 - E. Writing cruise reports
 - F. Computer Evaluations
- IV. Variable Plot Cruising
 - A. Concepts
 - B. Tallies
 - H. Computing cruise volumes
 - I. Computing stand characteristics
 - J. Writing cruise reports

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- K. Using field data recorders
- L. Evaluations using the computer
- V. 3-P Cruising
 - A. Concepts
 - B. Determining measure trees
 - C. Computing results