FOR 237 : RESOURCE SAMPLING

Transcript title

Resource Sampling

Credits

3

Grading mode

Standard letter grades

Total contact hours

50

Lecture hours

20

Lab hours

30

Recommended preparation

MTH 102 or a course from the foundational requirements math list; FOR 235 and FOR 236. Recommended to be taken with

Course Description

Includes instruction in log scaling, tree measurement techniques, sampling statistics, tree volume and tree taper equations, sampling and field procedures for equal probability (sample tree and fixed area) and variable probability (3P and point sampling) sampling systems. Concludes the sequence of FOR 235, FOR 236, and FOR 237.

Course learning outcomes

Explain the need for, benefits of, and disadvantages of sampling.
Determine the volume of trees using standard volume tables, local volume tables, form class tables, tariff tables, regression analysis, and volume/basal area ratios.

3. Explain the difference between gross and net volume and the causes and indications of volume loss after harvesting a timber stand.

4. Explain the basic concepts of sample tree, strip cruising, and 3P sampling.

5. Cruise a stand of timber using random or systematic sampling using fixed or variable plot methods and report the results.

Content outline

- 1. Sampling methods overview: 100% enumeration, sample tree, stratified, 3P
- 2. Plot types: fixed, variable, line, strip ... etc
- 3. Basal area and tree count metrics: BA, BAF, VBAR, TPA, SCF, finger calibration.
- 4. Tables and volume equations: Tree Vol Equations, Taper/Form Class, Tariff tables, USFS Vol Equations
- 5. Stand and Stock tables
- 6. Designing cruise types and plots: Pre-cruise data and sample size determination (SSD)

- 7. Wildlife and downed woody debris: Cruising for wildlife, DWD/Browns transects
- 8. Dendrochronology: Sampling for historical conditions, fire history
- 9. 3P sampling, KPI, Cruisers stick review
- 10. Course wrap-up: Capstone preview, final review, laboratory practical, and cruise report presentation.

Required materials

- 1. Calculator with statistical functions, or laptop with Excel installed
- 2. Rite in the Rain® Transit Notebook (No. 301)
- 3. 3H or 4H pencil
- 4. Hard hat
- 5. Field boots
- 6. Tatum
- 7. It is suggested that you procure a Cruiser's Vest