

FOR 238 : FORESTRY DATA ANALYSIS

Transcript title

Forestry Data Analysis

Credits

3

Grading mode

Standard letter grades

Total contact hours

50

Lecture hours

20

Lab hours

30

Recommended preparation

FOR 237.

Course Description

Covers the fundamentals of storing, analyzing, and presenting data. Emphasizes the use of spreadsheets, databases, descriptive statistics, and linear regression to analyze and present data in the context of natural resource management.

Course learning outcomes

1. Explain the use of basic statistics in natural resources management.
2. Demonstrate the use of data transformations, statistical analysis, user-defined Excel functions for determining tree volume, and the creation of stand volume tables.
3. Demonstrate the use of simple databases for processing and storing data.
4. Implement the use of graphs for displaying and analyzing data.

Content outline

1. Introduction, or review, of discrete and continuous variables, significant figures, rounding, and the normal statistical distribution.
2. Descriptive statistics: arithmetic mean, median, mode, range, quadratic mean, standard deviation, standard error of the mean
3. Use of spreadsheets for storing, sorting, equations, order of operations, and functions.
4. Displaying and analyzing data using graphs.
5. Bar, Column, Pie, and Line Graphs
6. Introduction to the use of Inferential statistics.
7. t tests, simple and multiple regression, r, r², and line graphs with regression analysis
8. Excel User Defined Functions for Tree Volume and Volume Table
9. Access Database creation and use
10. Forest Vegetation Simulator

11. Project Data Analysis

12. Project Presentations

Required materials

Requires textbooks and the following equipment: Calculator with statistical functions, or laptop with Excel installed.