

FOR 230B : FOREST SURVEYING

Transcript title

Forest Surveying

Required materials

Textbook required, see syllabus for details.

Credits

3

Grade mode

Standard letter grades

Contact hours total

50

Lecture hours

20

Lab hours

30

Recommended preparation

FOR 230A or instructor approval.

Description

Studies basic surveying techniques and equipment emphasizing traversing, differential leveling, profiling, GPS mapping and basic coordinate geometry.

Learning outcomes

1. Use an automatic level for both differential and profile leveling.
2. Produce a stream profile using an automatic level.
3. Use GPS to navigate between points.
4. Collect and differentially correct GPS point, line, and area data using post-processing software.
5. Convert differential corrected GPS files to other types of files.
6. Perform a closed traverse using a total station, close within 15", and calculate area from coordinates using an Excel spreadsheet.
7. Perform a closed traverse using differential GPS and calculate land area from coordinates.
8. Locate land records using web based and hardcopy county resources.
9. Use trigonometry to determine slope distance, horizontal distance, differences in elevations, latitudes, departures, and lengths of lines.

Content outline

- Introduction and Overview
- Basic Concepts
- GPS Concepts
- GPS Mapping
- Introduction to Leveling
- Differential Leveling
- Profile Leveling
- Traversing
- Theodolite and Total Station Use
- Survey Quality
- County and State Records Offices