

Land Pro Seminars - Introduction to GPS Surveying

Course Description – “Introduction to GPS Surveying”

Approved Florida Board of professional Surveyors and Mappers – Course No. 7431
6 HR. Continuing Education Credit in General Category
Instructor: David Melvin, PLS, CFM



“Introduction to GPS Surveying” is a six hour introductory level course for land surveyors and engineers. The course teaches basic GPS concepts, principles, and measurement procedures.

Course Topics – “Introduction to GPS Surveying”

- GPS Principles
- Reference Systems
- Accuracies and Sources of Errors
- Selecting GPS Equipment
- Planning GPS Surveys
- Processing / Adjustment of GPS Data



Course Objectives – “Introduction to GPS Surveying.”

The objective of “Introduction to GPS Surveying” is to present information regarding Global Positioning System (GPS) Technology. Information taught in the course can be used by the attendee in integrating GPS technology into their land surveying projects.

Evaluation Method – “Introduction to GPS Surveying”

For Instructor-Led / Classroom seminars the instructor will determine if course objectives have been met by the use of directed questions and practical problems that attendees will answer and discuss during the class.

Detailed Outline – “Introduction to GPS Surveying”

1. Introduction
2. GPS Basics
 - a. Overview of GPS concepts and principles
 - b. GPS Positioning Techniques
 - c. GPS Reference Systems
3. GPS - Absolute Positioning
 - a. Concepts
 - b. Errors
 - c. Accuracies
4. GPS – Differential Positioning
 - a. Concepts
 - b. Code Phase Tracking
 - c. Carrier Phase Tracking
 - d. Carrier Phase Techniques
 - e. Errors
 - f. Accuracies
5. Selecting GPS Equipment
 - a. Receivers
 - b. Auxiliary Equipment
 - c. Data Exchange Formats
6. Planning Data Collection
 - a. Selection of GPS Survey Technique
 - b. Planning Considerations
7. GPS Field Surveys
 - a. Absolute GPS Positioning
 - b. Differential GPS Code Phase Positioning
 - c. Differential GPS Carrier Phase Surveys
8. Post-Processing Differential GPS Data
9. Adjustment of GPS Surveys
10. Summary

