Evergreen Valley College

Course Description and Learning Outcomes for Course Syllabus

Course Description:

CADD-147 - Global Positioning System for Land Surveying **Units: 3**

Fundamentals of the global positioning system (GPS) and its applications in land surveying are introduced. The discussions include the three segments of GPS technology, i.e. the space segment that consists of a constellation of 24 satellites orbiting around the earth, the control segment that consists of five ground monitoring stations, and the user segment that consists of two categories of receivers. Among the topics studied are GPS observables, planning for a GPS field survey, GPS data processing, and GPS surveying techniques. Emphasis is given to practical applications of GPS technology in surveying.

Lecture Hours: 2 Lab Hours: 3 Repeatable: No Grading: L

Prerequisite: ENGR 061

Recommended: 1. Written and speaking skills 2. Ability to use Autocad and MS Office

CAN: None

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: None Degree Applicable: AS

CSU GE: None District GE: None IGETC: None

Learning Outcomes:

1. Choose an appropriate system of units for a given survey
2. Setup a GPS system for obtaining satellite signals
3. Perform a survey using GPS technology
4. Acquire appropriate GPS data for the survey in process
5. Generate field notes appropriate to GPS surveying
6. Post process the GPS data
7. Calculate the linear horizontal distances and set the survey points
8. Calculate elevations
9. Calculate the angular distances between survey points
10. Perform error analysis of the acquired GPS and other measured data
11. Produce written reports to communicate results of field surveys