



Course Description:

CET-100 - Applied Math for Land Surveying Units: 1

This course presents math concepts and skills required in land surveying and mapping. The course covers topics in geometry and trigonometry related to surveying problem solving. Intersections of lines and circles are discussed and so are the formulas used in horizontal and vertical curves.

Lecture Hours: 0 Lab Hours: 3 Repeatable: No Grading: L

Prerequisite: MATH 013 with C or better

Recommended: Completion of geometry, in high school or college.

CAN: None

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

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None District GE: None IGETC: None

Learning Outcomes:

- I. Explain the importance of math in land surveying;
- II. Determine the azimuth and bearing angles;
- III. Solve right triangles;
- IV. Solve acute and oblique triangles with the laws of sines and cosines;
- V. Find projections of a line in the latitude and departure directions;
- VI. Determine the area of an irregular lot;
- VII. Find the latitudes and departures of intersection points among lines and circles;
- VIII. Determine the direction of a line; and
- IX. Apply the horizontal and vertical formulas for route design.