NVCC COLLEGE-WIDE COURSE CONTENT SUMMARY

CIV 171-172 - SURVEYING I-II (3 CR.) (3 CR.)

COURSE DESCRIPTION

Introduces surveying equipment, procedures and computations including adjustment of instruments, distance measurement, leveling, angle measurement, traversing, traverse adjustments, area computations and introduction to topography.

Introduces surveys for transportation systems including the preparation and analysis of topographic maps, horizontal and vertical curves, earthwork and other topics related to transportation construction.

Lecture 2 hours per week. Laboratory 3 hours per week. Total 5 hours per week.

GENERAL COURSE PURPOSE

To introduce the student to the principles of surveying, surveying equipment, surveying procedures, the analysis of field data, and the preparation of topographic maps.

ENTRY LEVEL COMPETENCIES

Competency in algebra and geometry. Co-requisite: MTH 115.

COURSE OBJECTIVES

The student will have a thorough knowledge of the basic instruments of surveying and their use, be able to analysis field data, and be able to prepare topographic maps.

MAJOR TOPICS TO BE COVERED

A. Mathematics of surveying
B. Measurement of distances
C. Measurement of angles
D. Analysis of traverses
E. Vertical curves
F. Basic and complex horizontal curves
G. Stadia surveying
H. Analysis and preparation of topographic maps