

## NVCC COLLEGE-WIDE COURSE CONTENT SUMMARY

### CIV 228 - CONCRETE TECHNOLOGY (2 CR.)

#### COURSE DESCRIPTION

Introduces properties of portland cement concrete, methods of mix design and adjustment, transportation, placement and curing in accordance with ACI and PCA recommended procedures. Lecture 2 hours per week.

#### GENERAL COURSE PURPOSE

To acquaint the student with the properties of portland cement concrete and the constituent materials. Emphasis will be placed on desirable and undesirable conditions and associated causes. Methods of designing concrete mixes will be considered as well as methods for insuring quality concrete in the field.

#### ENTRY LEVEL COMPETENCIES

A knowledge of soil mechanics. Prerequisite: CIV 225.

#### COURSE OBJECTIVES

Upon completion of this course, the student should be able to:

- A. understand the materials used in making concrete
- B. understand the methods and rational for designing concrete mixes
- C. understand the methods and procedures used to insure quality concrete
- D. specific concrete operations

#### MAJOR TOPICS TO BE COVERED

- A. Concrete as a material: constituents, factors effecting performance, desirable characteristics
- B. Mixing water and aggregate
- C. Air-entrained concrete
- D. Admixtures
- E. Design of concrete mixtures
- F. Concrete tests