

North Hennepin Community College

CMSV 2200: Construction Quality Assurance and Quality Control

A. COURSE DESCRIPTION

Credits: 4

Lecture Hours/Week: *.*

Lab Hours/Week: *.*

OJT Hours/Week: *.*

Prerequisites:

This course requires either of these prerequisites

BIT 2100 - Soils and Concrete Technology

CMSV 2100 - Soils and Concrete Technology

Corequisites: None

MnTC Goals: None

Students will be introduced to QA/QC and the concept of Construction Quality Management in the residential, commercial and civil construction industries. It will emphasize QA/QC in civil construction and focus on the types of materials, construction methods and quality control necessary for building road, bridges, underground utilities and other types of civil construction projects. Students will have the option to obtain a Minnesota Department of Transportation Concrete Field 1 certification as part of this course.

Prerequisite: CMSV 2100 Concrete and Soil Technology

B. COURSE EFFECTIVE DATES: 08/24/2015 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Building and construction code overview, quality management planning, documentation and reporting. The role of contract documents and specifications in QA/QC, Civil construction QA/QC requirements. Army Corp of Engineers 3 phase QA/QC control system, Minnesota Department of Transportation testing and certifications.

D. LEARNING OUTCOMES (General)

1. Understand the role of building and construction codes in residential and commercial construction projects.
2. Describe the Army Corp of Engineers three phase QA/QC control process
3. Develop a basic QA/QC plan for a construction project.
4. Describe basic geological components of rocks
5. Analyze MnDOT standard specifications for civil concrete construction.
6. Describe the components of concrete including aggregates, various cementitious materials, chemical admixtures and water commonly used in civil construction
7. Perform MnDOT concrete field sampling tests and procedures including concrete sampling, slump testing, air content testing, compressive strength testing and flexural strength testing.
8. Complete MnDOT certification testing in aggregate production and concrete field 1

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

2. Intellectual and Practical Skills - Including: Inquiry and analysis; Critical and creative thinking; Written and oral communication; Quantitative literacy; Information literacy; Teamwork and problem solving.

4. Integrative and Applied Learning - Including: Synthesis and advanced accomplishment across general education, liberal studies, specialized studies and activities in the broader campus community.