

**J. Sargeant Reynolds Community College
Course Content Summary**

Course Prefix and Number: CIV 135

Credits: 3

Course Title: Construction Management and Estimating

Course Description

Teaches the equipment and methods used in construction. Includes principles and economics of construction, planning and management, and principles of estimating primarily using highway and building project examples. Lecture 3 hours per week.

General Course Purpose

Course provides a foundation in the economics and management of civil engineering projects

Course Prerequisites/Corequisites (Entry-level competencies **required** for enrollment)

MTH 115 or equivalent

Course Objectives

Upon completing the course, the student will be able to:

- a. Apply earthmoving operations principles
- b. Apply fundamentals of excavating and lifting
- c. Apply loading and hauling performance data
- d. Apply principles of compacting and finishing
- e. Apply fundamentals of concrete and asphalt mixes
- f. Apply fundamentals of paving and surface treatment
- g. Apply methods of rock excavation
- h. Apply fundamentals of estimating, improving productivity and performance
- i. Apply types of foundations
- j. Apply methods of concrete construction and form design
- k. Apply principles of wood, steel and masonry construction
- l. Determine job planning and management (CPM)
- m. Apply fundamentals of construction economics, contracts, safety and health
- n. Apply fundamentals of estimating, improving productivity and performance

Major Topics to be Included

- a. Introduction
- b. Earthmoving and heavy construction
- c. Building construction
- d. Construction management
- e. Construction estimating

Effective Date of Course Content Summary: February, 2009