

**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. Co-requisite MTH 115 or equivalent. Lecture 3 hours per week.

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

Course Prerequisites and Co-requisites:

Co-requisite: 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; and
- 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