Minnesota State University Moorhead

CM 425: Equipment Productivity and Analysis

A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 2

Lab Hours/Week: 1

OJT Hours/Week: *.*

Prerequisites:
CM 335 - Estimating II-Pricing and Productivity

Corequisites: None

MnTC Goals: None

A study of planning, estimating, and managing performance of commonly recognized construction equipment. This course will emphasize the factors that govern or control equipment productivity on construction projects. Students will also study operating and ownership costs.

B. COURSE EFFECTIVE DATES: 02/10/2001 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Fundamentals knowledge of earthmoving terminology, concepts, and processes.
2. Uses and methods of various types of construction equipment (scrapers, dozers, excavators, loaders, trucks, etc.)
3. Analyze the best mix of construction equipment and methods to construct a project.
4. Types and uses of other construction equipment ¿ i.e. Aggregate Crushing, Concrete and Asphalt Roadway applications, etc.
5. Quantity surveys for earthwork projects and develop productivity rates for various pieces of construction equipment.

D. LEARNING OUTCOMES (General)

1. Students will understand basic earth moving fundamentals, i.e. soil volume change, rimpull, etc.
2. Students will understand the types and uses of construction equipment (scrapers, dozers, excavators, loaders, trucks, cranes, etc.)
3. Students will complete a series of homework assignments where they will analyze productivity rates for various pieces of construction equipment and price out the cost of construction equipment.
4. Students will demonstrate knowledge lifting and hoisting systems, specifically addressing many crane parameters, including safety, load calculation, lifting radius, and other properties.

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

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted