

## CE 350 – CONSTRUCTION ESTIMATING AND COST CONTROL

Type (check one):                      Required: \_\_\_\_\_      Elective:   X  

**2005-2006 Catalog Data:**      CE 350. Construction Estimating and Cost Control. Methods of making quantity surveys, estimating construction cost, construction scheduling and methods of cost control. The study of labor relations as they affect construction cost, scheduling and job control. Prerequisite: Junior standing. *One semester, three credits.*

**Prerequisites:**                      Junior standing

**Co-Requisites:**                    None

**Textbook:**                          Robert L. Peurifoy & Garold D. Oberlender, *Estimating Construction Costs*, McGraw-Hill, Fifth Edition, 2002.

**Other Required Materials:**      None

**Other References:**                Caterpillar Performance Handbook

**Instructor:**                         Mr. Gene McGinnis, Assistant Professor of Civil and Environmental Engineering

**Course Objectives:**                Students will develop an understanding of the problems and methods of operations of the construction manager, general contractor and subcontractors. Students will be able to estimate the costs and productivity of various types of construction equipment and procedures. Students will learn how to make a quantity survey for typical parts of a construction project and estimate the cost.

**Prerequisites by Topics:**            1.    Basic mathematics and engineering graphics

**Topics:**                                1.    Introduction to the estimating process  
2.    Bid documents  
3.    Cost of construction equipment and labor  
4.    Handling and transporting material  
5.    Earthwork and excavation  
6.    Scheduling  
7.    Highway and pavements  
8.    Foundations  
9.    Concrete and steel structures  
10.   Masonry  
11.   Commercial cost estimating guides  
12.   Bid strategies

**Class Schedule:**                    Two 75-minute sessions per week.

**Prepared by:** Mr. Gene McGinnis, P.E.

**Date:** October 2005

**PROFESSIONAL COMPONENT:  
CE 350 – CONSTRUCTION ESTIMATING AND COST CONTROL**

Category (check one)	<input type="checkbox"/> Math/Basic Science <input checked="" type="checkbox"/> Engineering <input type="checkbox"/> General Education <input type="checkbox"/> Other
Design (check one)	<input type="checkbox"/> Significant <input type="checkbox"/> Some <input checked="" type="checkbox"/> None
Realistic Constraints (check all that apply)	<input checked="" type="checkbox"/> Economic <input type="checkbox"/> Environmental <input type="checkbox"/> Sustainability <input type="checkbox"/> Manufacturability <input type="checkbox"/> Ethical <input checked="" type="checkbox"/> Health & Safety <input type="checkbox"/> Social <input checked="" type="checkbox"/> Political

**Relationship to Program Outcomes:**

Check all that apply:

- (a) an ability to apply knowledge of mathematics, science, and engineering
- (b) an ability to design and conduct experiments, as well as to analyze and interpret data
- (c) an ability to design a system, component, or process to meet desired needs
- (d) an ability to function on multi-disciplinary teams
- (e) an ability to identify, formulate, and solve engineering problems
- (f) an understanding of professional and ethical responsibility
- (g) an ability to communicate effectively
- (h) the broad education necessary to understand the impact of engineering solutions in a global and societal context
- (i) a recognition of the need for and an ability to engage in life-long learning
- (j) a knowledge of contemporary issues
- (k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice