

CEE 4500 (5500) CONSTRUCTION ENGINEERING MANAGEMENT
Elective Course

Catalog Description:

Lec. 3. Credit 3.

Prerequisite: Within two semesters of graduation. The design and management of the construction phase of a project: scheduling, estimating, contracts, laws, financing, and safety.

Math & Basic Sciences:	0 Credits	Course Coordinator:	Lenly J. Weathers
Engineering Topics:	3 Credits	Contains Significant Design:	No
General Education:	0 Credits	Updated:	09/30/2013
Other:	0 Credits	Specify Type if Other:	

Text Book(s) and Supplemental Material(s):

How to Estimate with RSMeans Data, Mubarak, 4th Ed., RSMeans

Course Goal(s):

To introduce the students to the steps taken to initiate and complete the construction phase of a project.

Instructional Outcomes for the Course:

Students will be expected to:

1. identify the parties involved in a construction project;
2. explain how the A/E firm initiates a construction project;
3. answer questions about *AIA A201 General Conditions* and the *AIA Contract document Between the Owner and Contractor*;
4. explain the CSI master-format for specifications;
5. demonstrate the ability to use Means Estimating Manual data;
6. prepare a detailed estimate for a construction project;
7. demonstrate the ability to use a commercial scheduling program; and
8. work productively within a team environment.

Criterion 3 Student Outcomes addressed by this Course:

- a) An ability to apply knowledge of mathematics, science, and engineering (Level 3)
- e) An ability to identify, formulate, and solve engineering problems (Level 3)
- g) An ability to communicate effectively (Level 2)
- k) An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice (Level 3)

Program Criteria addressed by this Course:

- Apply knowledge of mathematics through differential equations, calculus-based physics, chemistry, and at least one additional area of basic science, consistent with the program educational objectives (Level 3)
- Apply knowledge of four technical areas appropriate to civil engineering (Level 3)
- Explain basic concepts in management, business, public policy, and leadership (Level 2)

Course Topics:

1. Construction Administration and Contracts (17 %)
2. Business Organization (5 %)
3. Estimating (22 %)
4. Construction Safety (5 %)
5. Planning and Scheduling (22 %)
6. Measurement and Payment (5 %)
7. Team Project (24 %)

Additional Topics/Assignments for dual-level (4000/5000) courses:

More extensive assignments are required for CEE 5500.