Department: Civil Engineering
Number: CE 5324
Title: Construction Management

Catalog Description: construction contracting techniques, construction cost estimating, construction project planning, construction project scheduling, construction progress measurement

Prerequisites: Senior level undergraduate or graduate level in engineering

Textbook:  *Construction Project Management*
  *By Clough & Sears & Sears, Fourth Edition*

Course Objectives: The objective of this course is to introduce the student to the fundamental concepts and methods of construction project management. Specifically, the student will develop the following skills:
- Prepare bids for various types of construction contracts (2 & 3)
- Prepare budget for construction projects (2 & 3)
- Estimate cost of construction projects (2 & 3)
- Plan construction projects including work breakdown structure and project activities (2 & 3)
- Schedule construction projects using critical path method (CPM) (2 & 3)
- Learn probabilistic project scheduling using PERT (2, 3, & 4)
- Monitor project progress using management-by-exception principles (1, 2 & 3)
- Use software systems such as Primavera’s Project Planner and Microsoft Project (3 & 4)

Topics covered:

1. Construction Contracting (Chapters 1 & 2 and Handouts)
2. Cost Estimating (Chapter 3)
3. Project Planning (Chapter 4)
4. Project Scheduling (Chapter 5)
5. Production Planning (Chapters 6)
6. Project Time Acceleration (Chapter 7)
7. Resource Management (Chapter 8)
8. Project Time Management (Chapter 9)
9. Project Cost System (Chapter 10)

Class Schedule
- Spring 2004: MW 7:30 PM to 8:50 PM
- Spring 2005: Saturday 9:00 AM to 12:00 PM

Contribution of course to meeting the professional component: This course contributes to engineering management.

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