

**CEE431 Construction Contracting
Fall 2002**

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Construction Lab: 764-0528
TTh 3:00-5:00 + appointments
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Web site: www.engin.umich.edu/class/cee431

Text: *Construction Contracting*, 6th Ed., Richard H. Clough, John Wiley & Sons, Inc., 1994

A. Lectures

1. Segments of the construction industry
2. Methods of contracting for construction
 - a. Single and separate
 - b. Competitive and negotiated
 - c. Phased construction, construction management
3. Construction estimating
 - a. Recap and summary sheet
 - b. Labor costs
 - c. Estimate format – detailed estimate
 - d. Equipment costs
4. Construction bidding practices
 - a. Lump sum bids
 - b. Unit price bids
 - c. Subcontracts
5. Construction scheduling
 - a. Project networks (homework assignment)
 - b. Scheduling calculations (homework assignment)
6. Construction contracts
 - a. Form of construction contracts
 - b. General conditions of the contract (AIA A201)
 - c. Contract administration
7. Construction bonds: bid, performance, payment
8. Construction insurance: property, liability, employee
9. Forms of ownership of construction firm
10. Construction business management
 - a. Firm management
 - b. Project management
11. Financial management
 - a. Accounting and financial statements
 - b. Depreciation
 - c. Construction contracting income
 - d. Construction finance and cash flow
12. Cost accounting and control
 - a. Labor and equipment time cards
 - b. Variances

B. Project: Preparation of lump sum bid for Fire Station No. 6

Students form teams of three and prepare a detailed estimate for each of the items below. The final proposal for the project (lump-sum bid) is based on students' estimates and the actual subcontract prices.

Assignment	Assigned	Due
Project Description	Friday, September 6	Friday, September 20
Concrete (flatwork)	Friday, September 20	Friday, October 4
Concrete (remainder)	Friday, October 4	Friday, October 25
Excavation	Friday, October 25	Friday, November 15
Final Proposal	Friday, November 15	Friday, December 6

Project discussion is mixed with class lectures. The copies of the plans and specifications for this project and the Means Estimating Handbooks are in the Construction Lab. The course GSI will be available for help with any questions regarding the project.

Honor Code Policy

All work is performed under the College of Engineering Honor Code. All problem sets (homework assignments), except for the term project, are not team assignments and are to be completed by each student working independently. You may consult with other students, but all written work, whether in scrap or final form, is to be generated by you working alone. You are not allowed to sit together and work out the details of the problems with anyone. Each team does its own work on all team assignments (term project). You are not allowed to look at assignments from prior terms. In general, you are not allowed to possess, use, or in anyway derive advantage from the existence of assignments, solutions, or any work prepared by other students in this or past terms. This applies to computer files as well. All work done using a computer must be yours alone and you must have entered every keystroke or mouse command. Consequently, you must never leave your computer files in directories where other students may have access to them. Doing so is equivalent to providing copies of your work to other students. Copy your files on floppy disks and erase them from the computer's hard drive. If you find other peoples' files relating to this course on the computers in the Construction Lab or in CAEN labs, you should bring the matter to the attention of the instructor immediately. Exams are individual efforts, not team efforts. Exams are taken with books closed. All work during exams is completely independent. Violation of this policy is grounds to initiate an action that would be filed with the Dean's office and would come before the College of Engineering's Honor Council. If you have any questions about this policy, please do not hesitate to contact the Instructor.

C. Course grade (approximate)

Midterm Exam	30%
Final Exam	40%
Project	30%

(Students must pass exams to pass course)

D. Schedule

First day of classes	Wednesday, September 4, 2002	
Last day of classes	Wednesday, December 12, 2002	
Lectures	Mon.-Wed.- Fri., 2315 GGB	10:30 - 11:30 AM
Midterm exam	Monday, November 4, 2002	10:30 - 11:30 AM
Final exam	Monday, December 16, 2002	4:00 - 6:00 PM

All dates, except for the final exam, are tentative. All students must take final exam as scheduled by the University.