

**CEE 431 Construction Contracting
Winter 2003**

Instructor:
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Office Hours 9-10, 11:30-12 MWF

Assisting Instructor:
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Construction Lab:
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Office Hours: To be determined

A. Lectures

1. Segments of the construction industry
2. Methods of contracting for construction
 - a. Single and separate contracts
 - b. Competitive and negotiated contracts
 - 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. Subcontracts
 - c. Unit price bids
5. Construction contracts
 - a. Form of construction contracts
 - b. General conditions of the contract (AIA A201)
 - c. Contract administration
6. Construction scheduling
 - a. Project networks, with homework assignment
 - b. Activity and project calculations, with homework assignment
7. Financial management
 - a. Accounting and financial statements
 - b. Construction contracting income
 - c. Construction finance and cash flow
8. Cost accounting and control
 - a. Variances
 - b. Labor and equipment time cards
9. Construction insurance: property, liability, employee
10. Construction bonds: bid, performance, payment
11. Contractor licensing
12. Forms of ownership of construction firm
13. Construction business management
 - a. Firm management
 - b. Project management c. Construction safety

CEE431 web site: www.RICarr.com

B. Project - Preparation of lump sum bid for Ann Arbor Fire Station #6

Students form teams of two or three and prepare a detailed estimate on each of the items below. Using the actual subcontract and materials bids from the original bid opening, they then prepare a lump sum proposal on the project.

1. Concrete flatwork Monday, January 27
2. Concrete remainder Monday, February 17
3. Excavation estimate Monday, March 24
4. Lump sum bid on project Monday, April 8

C. Course Grade (approximate)

Midterm Exam 20% Friday, March 7

Final Exam 40% Tuesday, April 22, 1:30 PM - 3:30 PM

Homework 40%

All dates, except Final Exam, are tentative. All students must take Final Exam as scheduled (by the University). Students must pass exams to pass course.

Required textbook: Richard H. Clough, Construction Contracting, John Wiley (6th Edition). Course will cover the entire textbook except for Labor Law and Labor Relations.

Lecture notes are available at the Ulrich's Bookstore, 662-3201, 549 East University (Copied by Dollar Bill Copying, 611 Church St., 665-9200).

D. Honor Code Policy (see <http://www.engin.umich.edu/class/cee431/Honor.htm>)

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 Honor Council. If you have any questions about this policy, please contact the instructor.