

CE4333 – ESTIMATING PLANNING & CONTROL
Fall 2007 Syllabus

MICHIGAN TECHNOLOGICAL UNIVERSITY¹
Department of Civil and Environmental Engineering

Instructor: Kris G. Mattila, Ph.D., P.E.

Office: Dillman Hall, Room 201H

Office Hours: Monday, Wednesday, and Friday. 11:00 A.M. to 12:00 Noon or by appointment

Phone: (906) 487-2523

Email: mattila@mtu.edu

Instructor: Amlan Mukherjee, Ph.D.

Office: Dillman Hall, Room 201D

Office Hours: Monday and Wednesday. 3:00 P.M. to 4:00 A.M. or by appointment

Phone: (906) 487-1952

Email: amukherj@mtu.edu

Lecture: Monday, Wednesday, and Friday, Dillman 214 @ 9:05 A.M. to 9:55 A.M.

<i>Week</i>	<i>Week Starting</i>	<i>Topic</i>	<i>Reading Assignment</i>
1	9/3/07	Introduction Estimating Background	Handout
2	9/10/07	Estimate Organization/Management Computer Based Estimating/ Spreadsheets	Handout
3	9/17/07	Sitework	Handout
4	9/24/07	Sitework	
5	10/1/07	Concrete	
6	10/8/07	Masonry	
7	10/15/07	Steel	
8	10/22/07	Subcontractors/General Conditions	
9	10/29/07	Bid Opening	
10	11/5/07	Project Award	
11	11/12/07	Project Control	Handout
		<i>Thanksgiving Break</i>	
12	11/26/07	Risk and Uncertainty	Handout
13	12/3/07	Risk and Uncertainty	Handout
14	12/10/07		

¹ This syllabus is subject to revision, as any schedule is. Sufficient notice will be provided to the student.

CE4333 – ESTIMATING PLANNING & CONTROL
Fall 2007 Syllabus

Course Objective:

The objective of CE4333 is to expose the student to the basics of construction estimating. Many of these techniques are applicable regardless of the type of project, delivery system or contract type. Ancillary objectives include the ability to interpret contract drawings, contract specifications, and the understanding of the logic required to develop a construction schedule. The contract drawings and specifications used for the architectural project in this class are the Michigan Tech Advanced Technology Development Complex (ATDC). The engineering project will be determined later.

Catalog Description:

Examination of the different types of estimates and the function of each type. Drawing interpretation and quantity take-off techniques will be explored leading to the development of an estimate. The relationship between contract specification, drawings, project control and the estimate will be illustrated.

Textbooks:

Construction Estimating Reference Data, Ed Sarviel, Craftsman Book Company, Carlsbad, CA.
Handouts
Building Construction Cost Data, and *Heavy Construction Cost Data*, various editions, R. S. Means, Kingston, MA.

Course Grading:

Tests	72%
Architectural Project	20%
5 Minute Safety Talk	8%

Tests:

Once we reach steady state and are working on the estimate each week there will be a discussion of material on Monday, followed by a work session in class on Wednesday, and a test on that material on Friday. The tests will be individual work.

Architectural Project:

The architectural project will be the work that you do on the estimate. Each week we will cover a particular topic (see page 1), which teams (of three) will be required to do the quantity takeoff and pricing. This material will result in a “bid opening” for the project. Actual “Material and subcontractor” prices will be used. This material will be organized by the teams in a folder to be graded.

Engineering Project:

The engineering project will be similar but no specific class sessions will be set aside for explaining material. The bid date will be at the end of semester.

Final Grades:

A	93-100%
AB	90-92%
B	83-89%
BC	80-82%
C	73-79%
CD	70-72%
D	62-69%
F	< 62%

ANY CURVING OF FINAL GRADES, PASS/FAIL DECISIONS, AND ANY OTHER ITEMS CONCERNING GRADES ARE AT THE DISCRETION OF THE INSTRUCTOR

CE4333 – ESTIMATING PLANNING & CONTROL
Fall 2007 Syllabus

NOTES:

1. All work **must** include your name
2. All work must include your CE4333 number (to be assigned later).
3. All work must be neat, legible, and follow a logical order. If assignments are not understandable no credit will be given. Work not done on a PC must be submitted on **engineering paper**.
4. Late work will not be accepted for grading.
5. Multiple pages must be **stapled**.
6. Where drawings are necessary they **must** be done on a computer drawing package.
7. Your attendance in class is expected. Material will be covered that is not in the text or the handouts.
8. Reading assignments should be done before lecture.
9. Everyone **must** participate in the final bid opening.
10. Please use email to contact me. A class email list has been setup for this course. The list name is ce4333-1. That is dash ell not dash one. Many questions can be answered with email.
11. A significant portion of this class is working in a group. This is because a significant portion of the work is more than individuals can do by themselves. Please notify me if your group is not functioning.
12. In class work **cannot** be made up.
13. Tests can only be made up for university excused absences.
14. Additional items as needed.

ABET Program Outcomes

Your engineering degree is accredited by the Accreditation Board for Engineering and Technology (ABET). ABET provides quality assurance by accrediting engineering programs. There are 11 outcomes that ABET expects you to have by the time you graduate. You will be exposed to these in many different courses. In this course the following outcomes are addressed to some extent:

- a. an ability to apply knowledge of mathematics, science, and engineering
- c. an ability to design a system, component, or process to meet desired needs
- e. an ability to identify, formulate, and solve engineering problems
- f. an understanding of professional and ethical responsibility
- 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
- k. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

MTU ADA Statement:

MTU complies with all federal and state laws and regulations regarding discrimination, including the Americans with Disabilities Act of 1990 (ADA). If you have a disability and need a reasonable accommodation for equal access to education or services at MTU, please call the Dean of Students Office, at 2212. For other concerns about discrimination, you may contact your advisor, department chair, or the Affirmative Action Office.