

CE3332 – FUNDAMENTALS OF CONSTRUCTION ENGINEERING
Fall 2006 Syllabus¹

MICHIGAN TECHNOLOGICAL UNIVERSITY
Department of Civil and Environmental Engineering

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Office: Dillman Hall, Room 201H; Office Phone: 487-2523

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

Lecture: Monday, Wednesday & Friday, Dillman 214 @ 10:05 A.M. and 3:05 P.M.

Students must attend the lecture during the time period that they are assigned.

Teaching Assistant: Matt Smith, mzsmith@mtu.edu

Dillman 108, Office Hours: Tues. and Thurs. 10:00 A.M. to 11:30 A.M.

<i>Week</i>	<i>Week Starting</i>	<i>Recitation Topic</i>	<i>Reading Assignment</i>
1	9/4/06	Introduction and Overview <i>K-Day – No PM Class on Friday</i>	Chapters 1 & 2
2	9/11/06	Terminology	Chapters 3 & 4
3	9/18/06	Cash Flow	Chapter 9
4	9/25/06	Equipment Ownership <i>Homecoming – No PM Class on Friday</i>	Chapter 11
5	10/2/06	Equipment Productivity	Chapter 12
Evening Exam: Monday, October 9, 2006. 6:00 PM. AM in Fisher 138. PM in Fisher 139			
6	10/9/06	Equipment Continued	
7	10/16/06	Labor Issues and Estimating	Sections 14.20 and 14.21
8	10/23/06	Estimating	RS Means
9	10/30/06	Quality, Safety, & Materials Management	Chapters 16 and 17
10	11/6/06	Scheduling: Activities, Bar Charts	Chapters 6 and 7
Evening Exam: Monday, Nov. 13, 2006. 6:00 PM. AM in Fisher 138. PM in Fisher 139			
11	11/13/06	Network Diagrams, Critical Path, Precedence Diagrams	Handouts
	11/20/06	<i>Thanksgiving Break</i> <i>No Class</i>	
12	11/27/06	Computerized Scheduling	“
13	12/4/06	Resource Scheduling	“
14	12/11/06	Schedule Control/Optimum Cost Scheduling	“
15	12/18/06	Final Exam Date & Time to be announced.	

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

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Course Objective:

Students should gain a feel for the construction industry and understand basic terminology, techniques, and principles applicable to construction engineering. An important aspect will be learning fundamental techniques that are applicable to a wide variety of construction types (i.e. heavy, highway, building, etc.) and methods. The basic knowledge required of individuals employed in the construction industry should be a result.

Catalog Description:

Introduction to concepts required by professionals involved in the construction industry. Includes contracts, bidding, estimating, scheduling, cash flow, safety, labor issues, equipment ownership and productivity. May not be enrolled in one of the following Class(es): Freshman

Textbook:

Construction Management, Third Edition, Daniel W. Halpin, 2006, John Wiley and Sons, Inc.

Handouts will be provided for additional reading assignments.

Course Grading:

Assignments	15%
Scheduling Project	10%
2 Exam(s) and Final	75%

Final Grades:

A	93-100%
AB	90-92%
B	83-89%
BC	80-82%
C	73-79%
CD	70-72%
D	65-69%
F	< 65%

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

Scheduling Project:

The project will be to accurately, completely, and professionally plan and schedule a simple construction project. More information will follow. You will work with someone on this.

Attendance:

Attendance is expected. The material is in the texts and handouts but additional material will be covered in class that you will be responsible for. If you miss a session, you are responsible for getting the notes from a classmate. Any in class assignments or opportunity quizzes misses are not possible to make up.

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NOTES:

1. Attend the lecture that you are scheduled for. Both lectures are full and there are limited empty seats!
2. Assignments are due at the beginning of the lecture session.
3. Late assignments **will not** be accepted. Don't even ask.
4. Assignments must be **neat, legible, and follow a logical order**. If assignments are not easily understandable no credit will be given. Assignments not done on a PC must be submitted on **engineering paper**. **No** loose leaf, spiral notebook, or any other type of paper will be accepted.
5. Each assignment **must include** your CE3332 student number (to be assigned).
6. Where drawings are necessary they **must** be done on a computer drawing package.
7. Multiple page assignments must be **stapled**. If not, they will not be graded.
8. Reading assignments should be done **before** lecture.
9. Graduating seniors will **not** be exempt from taking the final exam.
10. Please use email to contact me. If you want to send a message to the class a class email list has been setup for this course. The list name is ce3332-l. That is dash ell not dash one. Many questions can be answered with email.
11. The scheduling package that we will use is called MS Project. It is available on CEE computers.
12. Additional note/requirements may be added as the semester progresses.
13. If any portion of the class is not completed (exams, project) the result will be an "F" in the class.

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.

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.