

August 20, 2008

To: The Faculty of the College of Engineering
From: Division of Construction Engineering and Management
Subject: New Course

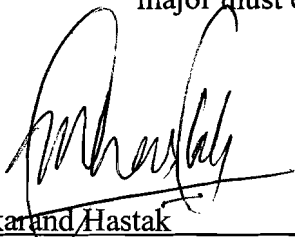
The Faculty of the Division of Construction Engineering and Management (CEM) has approved the following new course listed below. This action is now submitted to the Engineering Faculty with recommendation for approval.

From:

CEM 22000 Construction Management
Sem. 1 & 2 Class 3, cr.3.
Prerequisite: CEM 19100 – Construction Internship I

Course Description: This course introduces concepts relating to the nature of the construction industry, construction contracts, legal and management organization of construction companies, basics of the design and construction process, the five Ms of construction - management, materials; manpower, machines, and money - as well as an introduction to the role of estimating and project scheduling. Safety and the concepts of construction management relationships also will be introduced.

Reason: This course will be taught by the same instructor of the existing CE 22000 Construction Management course in fulfillment of the Construction Engineering (CNE) degree requirements. The syllabus of the existing course is attached. This course will be co-listed and continue to be offered in both the Spring and Fall semesters. CEM major must enroll in this course to fulfill degree requirements.


Makarand Hastak
Professor and Head

August 20, 2008

**CE 220: Construction Management
Course Description**

CE 220 - CONSTRUCTION MANAGEMENT

Professor: Dr. Dulcy M. Abraham
Office: CIVL 1241 **Email:** dulcy@ecn.purdue.edu
Office Hours: Monday 11:30 a.m. – 1:00 p.m.
Wednesday 11:30 a.m. – 1:00 p.m.

Lectures: Monday/Wednesday/Friday 10:30 a.m. - 11:20 a.m.
EE 117

Teaching Assistants: Mr. Nader Naderpajouh
CIVL 1255 email: nnp@purdue.edu
Office hours: Wednesday 1:00 p.m. – 2:30 p.m.
Thursday 1:00 p.m. – 2:30 p.m.

Mr. Ziad Tamer
CIVL 1255 email: ztamer@purdue.edu
Office hours: Tuesday 12:30 p.m. – 2:00 p.m.
Thursday 10:30 a.m. – 12:00 p.m.

TEXTBOOK:

Halpin, D. W. (2006). Construction Management (3rd Edition). John Wiley and Sons, Inc.

CATALOG DESCRIPTION

This course introduces concepts relating to the nature of the construction industry, construction contracts, legal and management organization of construction companies, basics of the design and construction process, as well as an introduction to the role of estimating and project scheduling. Safety and concepts of construction management relationships will also be discussed.

OBJECTIVES OF THE COURSE

The course is designed to introduce students to the basic concepts of construction management.

By the end of this course, students should be able to:

- a) Work with construction schedules and determine which activities are critical to the timely completion of the project.
- b) Identify different types of construction contracts and specifications.
- c) Calculate the productivity of construction equipment.
- d) Calculate the costs associated with construction equipment and construction labor.
- e) Calculate the peak financial requirement for a given project based on project revenues and expenses.
- f) Understand the importance of safety on the construction site.
- g) Understand and implement the principles involved in controlling costs on a construction project.

The course contributes to the following BSCE/BSCEM Program Objectives at Purdue University:

Technical Knowledge, Complementary Knowledge, Opportunities for Learning, and Professional Preparation.

ATTENDANCE

In accordance with Purdue University Regulations: "Students are expected to be present for every meeting of classes they

are enrolled... All matters relative to attendance, including the make-up of missed work, are to be arranged between the student and the instructor involved." Any anticipated absences must be cleared with the instructors, in advance if possible, with a word-processed memorandum stating the date and the reason for the absence or the absence will be considered unexcused.

A student may have no more than two unexcused absences. Three unexcused absences will result in a grade reduction of one letter grade. Four unexcused absences will result in a grade of "I" or "F" in the course. Failure to be present at any class does not relieve the student of his/her obligations for the materials covered or assigned in class. **NO ABSENCES WILL BE EXCUSED ON DAYS OF SCHEDULED EXAMS. All assignments and project reports have to be turned in by the time and date specified or they will not receive any credit. If you miss an unannounced quiz, it will count as zero, unless an excuse approved by the Dean of Students is presented within one week of the quiz.**

HOMework ASSIGNMENTS

Assignments should be turned in word-processed format or handwritten on engineering paper. Assignments which deviate from these instructions will not be accepted. **Assignments should be turned in with your name, course number, and assignment number at the top of the first sheet. Pages should be numbered. Professional presentation, good organization, and proper documentation are very important components of the homework assignment grade.** Graded homework assignments should be picked up from CIVL 1255.

Assignments are due on at the beginning of class on Friday of the week after which it was assigned (e.g., the first homework assignment is due on Friday, January 18, 2008). **50% will be deducted if the homework is turned in by 3:00 pm on Friday when it is due. You will receive a grade of zero after that.**

In order to receive a grade in the class, all assignments must be turned in. Penalty scales for non-submissions are as follows:

- Homeworks due before Exam 1 (if not submitted by 10:30 a.m. on the date of Exam 1) – 5 percentage points off the final grade.
- Homeworks due after Exam 1 and before Exam 2 (if not submitted by 10:30 a.m. on the date of Exam 2) – 5 additional percentage points off the final grade.
- Homeworks due after Exam 2 and before the final week of classes (if not submitted by 10:30 a.m. on Monday, April 21, 2008) – 5 additional percentage points off the final grade.

QUIZZES

There will be quizzes (unannounced) covering the course material covered in class and/or assigned for the week.

TERM PROJECT

Students will work in teams of three to complete a term project. The project will chronicle the construction processes and management techniques at a local construction site. Progress reports will be presented in class in March and April 2008, and the final report will be submitted on Friday, April 18, 2008.

EXAMS

There are three exams (2 exams during the semester, 1 final exam) in the course. The exams cover material discussed in the lectures or included in the assigned readings up to the time of the exam. The final exam will be cumulative.

CE 220: Construction Management
Course Description

GRADING

*	Assignments	30%
*	Quizzes	10%
*	Term project	10%
*	Exam No. 1	15%
*	Exam No. 2	15%
*	Final Exam	20%
	Total	100%

There will be **no curve** for the final grade, only straight averages. The minimum cutoff for an A is 90%; for a B, it is 80%; for a C, it is 70%; and for a D, 60%. Anything below 60% is considered an F.

All matters relating to grading have to be presented through a word-processed memo, addressed to Professor Abraham and the teaching assistants. The teaching assistants will first review the memo, and will present their recommendation to Professor Abraham. The final decision will be made by Professor Abraham and the teaching assistants. This decision will be final and binding. If there are any further unresolved questions regarding the grading issue, they can be directed to the Head of the School of Civil Engineering..

**TENTATIVE COURSE SCHEDULE
CE 220: CONSTRUCTION MANAGEMENT**

<u>WEEK</u>	<u>LECTURE TOPIC</u>	<u>ASSIGNED READINGS/IMPORTANT DATES</u>
<u>WEEK 1</u> January 7 - 11	The Construction Industry	Chapter 1, Chapter 2 Homework #1 assigned
<u>WEEK 2</u> January 14 - 18	Project Development	Chapter 2, Chapter 3 Homework #2 assigned
<u>WEEK 3</u> January 21 - 25	Construction Phase Issues	Chapter 3 No class on Monday, January 21, 2008 - Martin Luther King Jr. Day Memorandum regarding term project due on Wednesday, January 23, 2008 Guest Speaker: Mr. Mark Miller, INDOT - January 25, 2008
<u>WEEK 4</u> January 28 -February 1	Construction Contracts Company Legal Structure	Chapter 4, Chapter 5 Homework #3 assigned
<u>WEEK 5</u> February 4 - 8	Construction Planning and Scheduling - I	Chapter 6, Chapter 7 CEM EXPO - February 7, 2008 (Thursday)
<u>WEEK 6</u> February 11 - 15	Construction Planning and Scheduling - II	Chapter 7 Homework #4 assigned EXAM 1 - Monday, February 11, 2008
<u>WEEK 7</u> February 18 - 22	Cash Flow	Chapter 9
<u>WEEK 8</u> February 25 - February 29	Project Funding	Chapter 10 Homework #5 assigned
<u>WEEK 9</u> March 3 - 7	Equipment Cost and Depreciation	Chapter 11 Guest Lecture: Mr. Greg Holthouse, Burns and McDonnell - March 5, 2008 Homework #6 assigned
<u>WEEK 10</u> March 10 - 14	No Classes - Spring Break	
<u>WEEK 11</u> March 17 - 21	Equipment Productivity	Chapter 12 Homework #7 assigned Progress Report - Group 1 - due on March 21, 2008
<u>WEEK 12</u> March 24 - 28	Labor Relations and Labor Costs	Chapter 14 EXAM 2 - Wednesday, March 26, 2008 Progress Report - Group 2 - due on March 28, 2008
<u>WEEK 13</u> March 31 - April 4	Labor Costs	Chapter 14 Progress Report - Group 3 - due on March 31, 2008 Progress Report - Group 4 - due on April 4, 2008 Homework #8 assigned
<u>WEEK 14</u> April 7 - 11	Safety Management	Chapter 17
<u>WEEK 15</u> April 14 - 18	Materials Management	Chapter 16 SUBMISSION OF TERM REPORTS - Due on Friday, April 18, 2008
<u>WEEK 16</u> April 21 - 25	Estimating and Cost Control	Chapter 13, Chapter 15
<u>WEEK 17</u> April 28 - May 3	EXAM WEEK	Final Exam - Date to be announced after February 10, 2008 <small>(note: In prior years, the CE 220 Final Exam has been scheduled by the University on Saturday of Finals week)</small>