

PURDUE UNIVERSITY
REQUEST FOR ADDITION, EXPIRATION,
OR REVISION OF AN UNDERGRADUATE COURSE
(100-400 LEVEL)

EFD 65-07

DEPARTMENT Div of Construction and Engineering Mgmt EFFECTIVE SESSION Fall 2009

INSTRUCTIONS: Please check the items below which describe the purpose of this request.

- | | |
|---|---|
| <input checked="" type="checkbox"/> 1. New course with supporting documents | <input type="checkbox"/> 7. Change in course attributes (department head signature only) |
| <input type="checkbox"/> 2. Add existing course offered at another campus | <input type="checkbox"/> 8. Change in instructional hours |
| <input type="checkbox"/> 3. Expiration of a course | <input type="checkbox"/> 9. Change in course description |
| <input type="checkbox"/> 4. Change in course number | <input type="checkbox"/> 10. Change in course requisites |
| <input type="checkbox"/> 5. Change in course title | <input type="checkbox"/> 11. Change in semesters offered (department head signature only) |
| <input type="checkbox"/> 6. Change in course credit/type | <input type="checkbox"/> 12. Transfer from one department to another |

PROPOSED: Subject Abbreviation <u>CEM</u> Course Number <u>42500</u> Long Title <u>Construction Practice Project</u> Short Title <u>Construction Practice Project</u>	EXISTING: Subject Abbreviation _____ Course Number _____	TERMS OFFERED Check All That Apply: <input type="checkbox"/> Summer <input checked="" type="checkbox"/> Fall <input type="checkbox"/> Spring
Abbreviated title will be entered by the Office of the Registrar if omitted. (22 CHARACTERS ONLY)		CAMPUS(ES) INVOLVED <input type="checkbox"/> Calumet <input type="checkbox"/> N. Central <input type="checkbox"/> Cont Ed <input type="checkbox"/> Tech Statewide <input type="checkbox"/> Ft. Wayne <input checked="" type="checkbox"/> W. Lafayette <input type="checkbox"/> Indianapolis

CREDIT TYPE 1. Fixed Credit: Cr. Hrs. <u>3.0</u> 2. Variable Credit Range: Minimum Cr. Hrs. _____ (Check One) To <input type="checkbox"/> Or <input type="checkbox"/> Maximum Cr. Hrs. _____ 3. Equivalent Credit: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> 4. Thesis Credit: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	COURSE ATTRIBUTES: Check All That Apply 1. Pass/Not Pass Only <input type="checkbox"/> 2. Satisfactory/Unsatisfactory Only <input type="checkbox"/> 3. Repeatable <input type="checkbox"/> Maximum Repeatable Credit: <u> </u> 4. Credit by Examination <input type="checkbox"/> 5. Designator Required <input type="checkbox"/> 6. Special Fees <input type="checkbox"/> 7. Registration Approval Type Department <input type="checkbox"/> Instructor <input checked="" type="checkbox"/> 8. Variable Title <input type="checkbox"/> 9. Remedial <input type="checkbox"/> 10. Honors <input type="checkbox"/> 11. Full Time Privilege <input type="checkbox"/> 12. Off Campus Experience <input type="checkbox"/>
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Instructional Type	Minutes Per Mfg	Meetings Per Week	Weeks Offered	% of Credit Allocated	Delivery Method (Asyn. Or Syn.)	Delivery Medium (Audio, Internet, Live, Text-Based, Video)	Cross-Listed Courses
Lecture	2 - 3	50 - 75					
Recitation							
Presentation							
Laboratory	3	1					
Prep							
Studio							
Distance							
Clinic							
Experiential							
Research							
Ind. Study							
Pract/Observ							

COURSE DESCRIPTION (INCLUDE REQUISITES):
The capstone senior design course for construction engineering and management majors. Working in teams in a realistic engineering practice environment, students use an actual construction project to accomplish open-ended project planning and systems design. Course covers construction project strategy, cost estimating and bidding, constructability analysis, project scheduling, contract conditions, project organization, site analysis and development, safety and quality management, and information systems design. Comprehensive written submittals and oral presentations require integration of knowledge gained in previous courses and in construction internships. Prerequisites CEM29100.

Calumet Department Head	Date	Calumet School Dean	Date
Fort Wayne Department Head	Date	Fort Wayne School Dean	Date
Indianapolis Department Head	Date	Indianapolis School Dean	Date
North Central Department Head	Date	North Central Chancellor	Date
West Lafayette Department Head	Date	West Lafayette College/School Dean	Date

West Lafayette Registrar Sandra Schaffer 5/31/09 Date

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Indianapolis Department Head _____	Date _____	Indianapolis School Dean _____	Date _____
North Central Department Head _____	Date _____	North Central Chancellor _____	Date _____
West Lafayette Department Head _____	Date <u>2/25/09</u>	West Lafayette College/School Dean <u>Michael J. Hain</u>	Date <u>5/26/2009</u>
		West Lafayette Registrar _____	Date _____

August 20, 2008

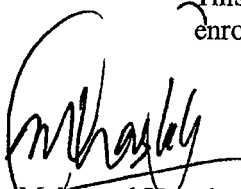
To: The Faculty of the College of Engineering
From: Division of Construction Engineering and Management
Subject: New Course

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.

CEM 42500 Construction Practice Project
Sem. 1 Class 5, cr.3.
Prerequisite: CEM 29100 – Construction Internship II
CEM 32100 – Construction Planning & Scheduling

Course Description: The capstone, senior design course for construction engineering and management majors. Working in teams in a realistic engineering practice environment, students use an actual construction project to accomplish open-ended project planning and systems design. Course covers construction project strategy, cost estimating and bidding, constructability analysis, project scheduling, contract conditions, project organization, site analysis and development, safety and quality management, and information systems design. Comprehensive written submittals and oral presentations require integration of knowledge gained in previous courses and in construction internships.

Reason: This course will replace the existing CE 42500 Construction Practice Project course in fulfillment of the Construction Engineering (CNE) degree requirements. The syllabus of the existing course is attached. This course will be offered in the Fall semester. CEM majors must enroll in this course to fulfill degree requirements.



Makarand Hastak February 10, 2009
Professor and Head

APPROVED FOR THE FACULTY
OF THE SCHOOLS OF ENGINEERING
BY THE ENGINEERING
CURRICULUM COMMITTEE

ECC Minutes 4/1/09 #23
Date 4/1/09
Chairman ECC R. Cipra

SUPPORTING DOCUMENTATION

CE 42500

CONSTRUCTION PRACTICE PROJECT SYLLABUS

FALL 2008

Professors: Deanna McMillan, Ph.D. CIVL 1219 Phone: (765) 494-2242
Email: dimcmill@purdue.edu
Office hours: by appointment, schedule on office door

A. COURSE CONCEPT:

This is the capstone course in your BSCNE program. You will have the opportunity to integrate and apply a wide range of subjects that have already been addressed both in the classroom and during your internships. The framework for the course is realistic, and the course is based on an actual construction project currently underway. The project and work in this course is very similar to the work that will be expected of you in your early career after graduation.

Your assignments will be performed as a member of a student team. This “learning by doing” in teams is a valuable part of your Purdue education. You should be prepared to participate and fully utilize your abilities and knowledge, helping your team complete its tasks to the highest standards attainable.

B. OBJECTIVES OF THE COURSE: To provide the student knowledge and experience in:

1. All phases and aspects of construction project planning, engineering, and management at the project level;
2. The complexities and uncertainties of planning and decision-making in a realistic environment;
3. How construction activities by the constructor are influenced by owner needs and project design basis and features;
4. Methods and skills of oral and written communication; and
5. Methods, techniques and experience of working in teams.

C. EXPERIENTIAL LEARNING MEANS...

1. Submittals. Working as a student team, you will perform realistic and practical tasks, developing and presenting written submittals based on an actual, current construction project. You will be assigned in teams of four and five and will role-play a general contractor firm throughout the semester. You will develop open-ended plans, submittals and presentations, which will require planning, research, analysis, and decision-making just as in “real-world” construction engineering and management. You will make oral presentations on multiple project phases.
2. Case Studies. Problem identification, analysis, and recommendations about complex, real-world issues in construction will be required in the case-study problems utilized in this class. Each group is expected to utilize a Mentor firm as a resource in applying construction management principles and techniques to the aspects of the assigned community project.

D. TEXT: None required. Periodic homework assignments with handouts. Your team may have some costs for printing and production of your submittals and presentation materials.

E. TOPICS COVERED IN THE COURSE

1. Development and characteristics of construction documents; owner needs and criteria; defining project scope
2. Construction company marketing
3. Contractor's strategy for project execution
4. Constructability analysis
5. Pre-construction planning
6. Construction cost estimating and bidding
7. Project scheduling
8. Contractor conditions, general and special
9. Site analysis and site development
10. Organizing for the project: people, assignments, responsibilities
11. Project Communications and information systems planning
12. Temporary structures or Utilities
13. Quality assurance and quality control
14. Construction safety
15. Equipment planning and utilization
16. Materials management and Source Planning
17. Change orders
18. Project turnover
19. Issues of ethics in construction business
20. Work Breakdown Structures

F. STUDENT TEAM SUBMITTALS: GRADE SCALE

As a team, performing all the roles of a general contractor, you will develop and submit professionally prepared, thorough submittals, listed below (See attached Project Deliverables). Written, advance assignments for each submittal will provide you specific requirements and expectations.

Letter Grades:

A = 90.0 and above

80.0 <= B < 90

70.0 <= C < 80

F < 70

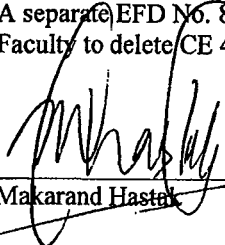
Since this course is the culmination of many classes here at Purdue University a high level of proficiency is required in order to pass, therefore anything below a grade of "C" will be failing. The point totals above are initial estimates and may change throughout the semester. Individual grades will be based on the grade points earned by the team, individual points, and the results of the peer evaluation.

Team Grading Policy: Each student on a team will receive the same grade (the team grade) on and the Final Presentation. At semester end, you will submit a Peer Evaluation Form, with which you can record any significantly better or lesser efforts by your teammates throughout the semester. This evaluation can result in an adjustment to your grade by a letter grade or more. An example of the form is attached at the end of this syllabus.

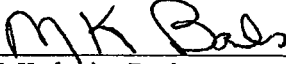
To: The Faculty of the College of Engineering
CC: Engineering Curriculum Committee (ECC)
From: Division of Construction Engineering and Management;
School of Civil Engineering
Date: 11/6/2008
Re: EFD No. 65-07 New Course – Construction Practice Project

This memo states that we are both in agreement that EFD No. 65-07 should move forward per the approval of the Faculty of the Division of Construction Engineering and Management. The new course, CEM 42500 Construction Practice Project will replace the existing CE 42500 Construction Practice Project per the approval of the Faculty of the School of Civil Engineering.

A separate EFD No. 89-07 will be submitted by the School of Civil Engineering, indicating the approval of the Faculty to delete CE 42500.



Makarand Hastak November 6, 2008
Professor and Head
Division of Construction Engineering and Management



M. Katherine Banks November 6, 2008
Bowen Engineering Head and Professor
School of Civil Engineering

