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.
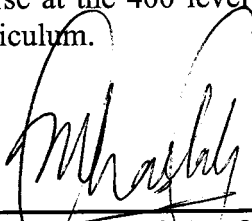
CEM 45500 Building Information Modeling
Sem. 2, Class 3. Lecture, Cr.3.
Prerequisite: CEM 29100 - Construction Internship II
               CEM 30100 - Project Control & Life Cycle Execution of Constructed Facilities
               or Instructor Permission

Course Description: The primary objective of this course is to provide students with an understanding of the concepts behind Building Information Modeling (BIM); how it can be used during design, construction, and operation of facilities; and how to apply it. This is a computer intensive course requiring computer programming for controlling applications, for computer graphics, and for database management.

Reason: This course is being taught as CEM 497 and will continue to be offered in the Spring semester. The syllabus for the existing course is attached. This course will serve as a key course at the 400 level for CEM majors, as part of the Construction Engineering undergraduate curriculum.

Makarand Hastak, Professor and Head
Division of Construction Engineering and Management

CEM 49700-002   Building Information Modeling

W 2:30-5:00pm Jan 12 - May 9, 2009 Matthews Hall 301

Instructor

Dr. Julio C. Martinez, CIVL Room 1245, 494-2250, Julio@purdue.edu, Office hours TBD

Objectives

This course will give you an understanding of the concepts behind Building Information Modeling (BIM); how it can be used during design, construction, and operation of facilities; and how to apply it. This is a computer intensive course requiring computer programming for controlling applications, for computer graphics, and for database management.

Course Structure

After introducing the basic concepts of BIM, we will develop our own "toy" BIM models using Microsoft Visio and programming for it with Visual Basic for Applications. This will provide us with a platform to explore many of the current issues related to BIM and its implementation. We will then learn how to use a commercial BIM solution (Graphisoft's ArchiCAD) to create Building Information Models and to use them for a variety of purposes.

Exams and Grading

There will be no exams in this course. All evaluation will be based on individual and group assignments.

Course Materials

Course Materials will include software documentation and tutorials, as well as articles that will be provided electronically to you.

Software

Microsoft Visio 2007.
Graphisoft ArchiCAD.

PURDUE UNIVERSITY
REQUEST FOR ADDITION, EXPIRATION, OR REVISION OF AN UNDERGRADUATE COURSE
(10000-40000 LEVEL)

DEPARTMENT Division of Construction Engineering and Management   **EFFECTIVE SESSION** Spring 2010 (201020)

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

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

PROPOSED:

Subject Abbreviation: CEM

Course Number: 45500

Long Title: Building Information Modeling

Short Title: Building Information Modeling

Abbreviated title will be entered by the Office of the Registrar if omitted. (30 CHARACTERS ONLY)

EXISTING:

Subject Abbreviation:

Course Number:

TERMS OFFERED
Check All That Apply:
- [ ] Summer
- [ ] Fall
- [✓] Spring

CAMPUS(ES) INVOLVED
- [ ] Calumet
- [ ] Cont Ed
- [ ] Ft. Wayne
- [ ] Indianapolis
- [ ] N. Central
- [ ] Tech Statewide
- [✓] W. Lafayette

CREDIT TYPE

1. Fixed Credit: Cr. Hrs. **3.0**
2. Variable Credit Range:
   Minimum Cr. Hrs
   (Check One) To [ ] Or [ ]
   Maximum Cr. Hrs
3. Equivalent Credit: Yes [ ] No [✓]

COURSE ATTRIBUTES: Check All That Apply

- [ ] 1. Pass/Not Pass Only
- [ ] 2. Satisfactory/Unsatisfactory Only
- [ ] 3. Repeatable
      Maximum Repeatable Credit:
- [ ] 4. Credit by Examination
- [ ] 5. Special Fees
- [ ] 6 Registration Approval Type
      Department [✓]   Instructor [✓]
- [ ] 7 Variable Title
- [ ] 8 Honors
- [ ] 9 Full Time Privilege
- [ ] 10 Off Campus Experience

Schedule Type	Minutes Per Mtg	Meetings Per Week	Weeks Offered	% of Credit Allocated
Lecture	150	1	16	100
Recitation				
Presentation				
Laboratory				
Lab Prep				
Studio				
Distance				
Clinic				
Experiential				
Research				
Ind. Study				
Pract/Observ				

Cross-Listed Courses

COURSE DESCRIPTION (INCLUDE REQUISITES/RESTRICTIONS):

Prerequisites: CEM 29100 Construction Internship II; CEM 30100 Project Control & Life Cycle Execution of Constructed Facilities

The primary objective of this course is to provide students with an understanding of the concepts behind Building Information Modeling (BIM). This is a computer intensive course requiring computer programming for controlling applications, for computer graphics, and for database management.

*COURSE LEARNING OUTCOMES

The student will learn and demonstrate how BIM can be used during design, construction, and operation of facilities; and how to apply these concepts to all phases of the construction process.

	Date		Date
Calumet Department Head		Calumet School Dean	
Fort Wayne Department Head		Fort Wayne School Dean	
Indianapolis Department Head		Indianapolis School Dean	
North Central School Dean		North Central Vice Chancellor for Academic Affairs	
West Lafayette Department Head	12/29/09	West Lafayette College/School Dean	
		West Lafayette Registrar	Date