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

EFD 27-12

Agricultural and Biological Engineering DEPARTMENT EFFECTIVE SESSION Fall INSTRUCTIONS: Please check the items below which describe the purpose of this request. New course with supporting documents 7. Change in course attributes (department head signature only) 2. Add existing course offered at another campus 8. Change in instructional hours Expiration of a course 3. 9. Change in course description Change in course number 10. Change in course requisites 5. Change in course title 11. Change in semesters offered (department head signature only) 6. Change in course credit/type 12. Transfer from one department to another PROPOSED: EXISTING: TERMS OFFERED Subject Abbreviation ABE Check All That Apply: Subject Abbreviation ✓ Fall Summer Spring 48400 Course Number Course Number CAMPUS(ES) INVOLVED Calumet N. Central Project Planning and Management Long Title Cont Ed Tech Statewide Ft. Wayne W. Lafavette Project Planning and Mgmt Short Title Indianapolis Abbreviated title will be entered by the Office of the Registrar if omitted. (30 CHARACTERS ONLY) CREDIT TYPE COURSE ATTRIBUTES: Check All That Apply 1. Fixed Credit: Cr. Hrs. 1. Pass/Not Pass Only 6 Registration Approval Type Variable Credit Range: Satisfactory/Unsatisfactory Only Department Instructor Minimum Cr. Hrs 3. Repeatable 7 Variable Title то 🗌 or  $\square$ (Check One) Maximum Repeatable Credit: 8 Honors Maximum Cr. Hrs 4. Credit by Examination 9 Full Time Privilege 5. Fees Coop Lab Rate Request Equivalent Credit: 10 Off Campus Experience Include comment to explain fee Schedule Type Minutes Meetings Per % of Credit Per Mtg Week Offered Allocated Cross-Listed Courses 16 100% Recitation resentation aboratory ab Prep Studio Distance Clinic Experiential Research nd. Study Pract/Observ COURSE DESCRIPTION (INCLUDE REQUISITES/RESTRICTIONS): Review of topics relevant to project planning and execution in industry, including technical communication, budgeting, team management, intellectual property rights, contracts and timelines. Students will select a Capstone project and assemble a project proposal within a team environment. Prerequisites: ABE 32500 and ABE 33000 Synthesize a project plan and proposal, including developing a budget and timeline. Communicate technical content to technical and non-technical audiences in a concise and informative manner. Enhance communitcation skills by presenting project proposal (written and oral) in a formal setting. 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 Faculty Senate Ci Vice Chancellor for Academic Affairs Date West Lafavette Department Head West Lafayette College/School Dean Date West Lafayette Registrar Date TO:

The Faculty of the College of Engineering

FROM:

The Faculty of Agricultural and Biological Engineering

RE:

New Course ABE 48400

The faculty of the Department of Agricultural and Biological Engineering has approved the following new course. This action is now submitted to the Engineering Faculty with a recommendation for approval.

#### **Project Planning and Management** ABE 48400

Sem. 1, Class 1, Cr. 1.

Requisites, Restrictions, and Attributes: ABE 32500 and ABE 33000.

**Description:** Review of topics relevant to project planning and execution in industry, including technical communication, budgeting, team management, intellectual property rights, contracts and timelines. Students will select a Capstone project and assemble a project proposal within a team environment.

This change will extend the senior design experience to two semesters as Reason: suggested by students who completed the Department's Agricultural Engineering Design courses. This course will prepare students to work on their senior design project in the spring semester by exposing them to facets of project management that they do not receive in the curricula. It will also allow them to develop a project plan for the Capstone project they are assigned. The course has been taught as a temporary offering since the fall of 2010. The results have been positive and the faculty would therefore like to officially make the change in approach to the capstone design experience.

Bernard A. Engel, Professor and Head

Senon Longe

Agricultural and Biological Engineering Department

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

Date 7/30/2012

Chairman ECC R. Cipra

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#### **COURSE CONTACT INFORMATION:**

Name: Dr. Bernard Engel Phone Number: 494-1162

E-mail Address: engelb@purdue.edu

Campus Address: ABE 219

**COURSE SUBJECT ABBREVIATION AND NUMBER:** ABE 48400

**COURSE TITLE: Project Planning and Management** 

**COURSE CREDITS AND INSTRUCTIONAL TYPE:** Sem. 1. Class 1, cr. 1.

**COURSE DESCRIPTION:** Review of topics relevant to project planning and execution in industry, including technical communication, budgeting, team management, intellectual property rights, contracts and timelines. Students will select a Capstone project and assemble a project proposal within a team environment.

### A. Justification

This change will extend the senior design experience to two semesters as suggested by students who have completed ABE 48500 Agricultural Engineering Design. This course will prepare students to work on their senior design project in the spring semester by exposing them to facets of project management that they do not receive in the curricula. It will also allow them to develop a project plan for the Capstone project they are assigned. The course has been taught as a temporary offering since the fall of 2010. The results have been positive and the faculty would therefore like to officially make the change in approach to the capstone design experience.

Level of Course: 100% anticipated enrollment of upper division students (seniors).

# B. Learning Outcomes and Method of Evaluation or Assessment

Learning outcomes:

- Synthesize a project plan and proposal, including developing a budget and timeline.
- Communicate technical content to technical and non-technical audiences in a concise and informative manner..
- Enhance communication skills by presenting project proposal (written and oral) in a formal setting.

Methods of evaluation or assessment:

Grades for this course will be based on the following:

Project proposal: 60% Project presentation: 20%

In-class participation and homework: 20%

 $A = \ge 90$ 

B = 80-89.5%

C = 70-79.5%

D = 60-69.5%

F = <59.5%

C. Pre- or Co-requisites: ABE 32500 and ABE 33000

D. Course Instructor(s): Dr. Bernard Engel

# E. Course Outline of Topics/Syllabus:

- 1. Introduction
- 2. Technical Writing
- 3. Design and Problem Solving Process
- 4. Quantitative decision making
- 5. Project scheduling and budgeting
- 6. Safety procedures when using departmental facilities and laboratories

# F. Reading List/Textbook:

Lectures and presentations will be drawn from the literature or from personal experience and knowledge of the person making the presentation.

# G. Library Resources (none)

# H. Example of a Course Syllabus

Instructors:

Dr. Bernie Engel

219 ABE

engelb@purdue.edu

Office phone: 765-494-1162

### **Course description:**

**ABE 484 Project Planning & Management**. Review of topics relevant to project planning and execution in industry, including technical communication, budgeting, team management, intellectual property rights, contracts and timelines. Students will select a capstone project and assemble a project proposal within a team environment.

**Course website:** <a href="http://engineering.purdue.edu/~engelb/capstone/">http://engineering.purdue.edu/~engelb/capstone/</a> (use abe for the login and password when prompted)

### **Optional Text:**

Getting Starting on Project Management by Paula Martin and Karen Tate. John Wiley, 2001.

# **Meeting time:**

Lecture: M 4:30-5:20 Location: ABE 204 & 205

Check course website for weekly schedule.

Grading:	Grading Scale:
Project proposal: 60 %	A ≥ 90 %
Project presentation: 20 %	B 80 – 89.9 %
In-class participation/homework: 20 %	C 70-79.5%
	D 60-69.5%
	F < 59.5%

### **Student learning outcomes:**

- Synthesize a project plan and proposal, including developing a budget and timeline.
- Communicate technical content to technical and non-technical audiences in a concise and informative manner.
- Enhance communication skills by presenting project proposal (written and oral) in a formal setting

### Class polices:

Students must attend every class and actively participate in class activities. If a student cannot attend class because of a family emergency or other legitimate reason, students must notify the instructor in advance and an alternative assignment will be given in place of class participation. Short writing assignments will be given periodically throughout the semester, which are due to the instructor by the end of the following class (or as specified). Deadlines for capstone project deliverables are indicated on the course website.

#### **Tentative Schedule:**

<u>Date</u>	<u>Content</u>
8/22	Course introduction
8/29	Technical writing
9/5	No class
9/12	Design/Problem solving process
9/19	Quantitative decision making; project descriptions available online
9/26	Project scheduling, budgeting
10/3	Safety – Scott Brand
10/7	1 <sup>st</sup> draft of proposal due
10/28	Intellectual property; Final draft of proposal due
11/28	Project presentations
12/5	Responses to industry reviewers due
2/27/12 4/12/12 or 4/19/12 4/27/12	Mid-term presentations & progress reports due Poster presentations & judging Final report due