

Check Appropriate Boxes: Undergraduate credit Graduate credit Professional credit

1. School/Division School of Engineering and Technology 2. Academic Subject Code ME

3. Course Number 405 (must be cleared with University Enrollment Services) 4. Instructor Variable

5. Course Title Seminar & Fundamentals of Engineering Review

Recommended Abbreviation (Optional) Seminar & FE Review
(Limited to 32 Characters including spaces)

6. First time this course is to be offered (Semester/Year): Spring 2009

7. Credit Hours: Fixed at 1 or Variable from _____ to _____

8. Is this course to be graded S-F (only)? Yes _____ No

9. Is variable title approval being requested? Yes No

10. Course description (not to exceed 50 words) for Bulletin publication: _____

A seminar series on mechanical engineering career options and guidance, professional development and licensing, and preparation for the Fundamental of Engineering examination.

11. Lecture Contact Hours: Fixed at _____ or Variable from _____ to _____

12. Non-Lecture Contact Hours: Fixed at 1 or Variable from _____ to _____

13. Estimated enrollment: 25 of which 0 percent are expected to be graduate students.

14. Frequency of scheduling: annual Will this course be required for majors? Yes

15. Justification for new course: This course prepares students for professional practice, and has material previously presented in the capstone design course.

16. Are the necessary reading materials currently available in the appropriate library? Will be provided.

17. Please append a complete outline of the proposed course, and indicate instructor (if known), textbooks, and other materials.

18. If this course overlaps with existing courses, please explain with which courses it overlaps and whether this overlap is necessary, desirable, or unimportant.

19. A copy of every new course proposal must be submitted to departments, schools, or divisions in which there may be overlap of the new course with existing courses or areas of strong concern, with instructions that they send comments directly to the originating Curriculum Committee. Please append a list of departments, schools, or divisions thus consulted.

Submitted by: [Signature] Date 1/19/09
Department Chairman/Division Director

Approved by: [Signature] Date 1-20-09
Dean

Date _____
Dean of Graduate School (when required)

Date _____
Chancellor/Vice-President

Date _____
University Enrollment Services

After School/Division approval, forward the last copy (without attachments) to University Enrollment Services for initial processing, and the remaining four copies and attachments to the Campus Chancellor or Vice-President.

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

Print Form

DEPARTMENT Mechanical Engineering

EFFECTIVE SESSION Spring 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:

EXISTING:

Subject Abbreviation ME Subject Abbreviation _____
 Course Number 405 Course Number _____
 Long Title Seminar & Fundamentals of Engineering Review
 Short Title Seminar & FE Review

TERMS OFFERED

Check All That Apply:

Summer Fall Spring

CAMPUS(ES) INVOLVED

Calumet N. Central
 Cont Ed Tech Statewide
 Ft. Wayne W. Lafayette
 Indianapolis

Abbreviated title will be entered by the Office of the Registrar if omitted. (22 CHARACTERS ONLY)

CREDIT TYPE

1. Fixed Credit: Cr. Hrs. 1
 2. Variable Credit Range: _____
 Minimum Cr. Hrs _____
 (Check One) To Or
 Maximum Cr. Hrs. _____
 3. Equivalent Credit: Yes No
 4. Thesis Credit: Yes No

COURSE ATTRIBUTES: Check All That Apply

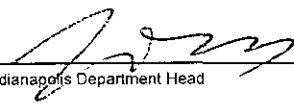
1. Pass/Not Pass Only
 2. Satisfactory/Unsatisfactory Only
 3. Repeatable
 Maximum Repeatable Credit: _____
 4. Credit by Examination
 5. Designator Required
 6. Special Fees
 7. Registration Approval Type Department Instructor
 8. Variable Title
 9. Remedial
 10. Honors
 11. Full Time Privilege
 12. Off Campus Experience

Instructional Type	Minutes Per Mtg	Meetings Per Week	Weeks Offered	% of Credit Allocated	Delivery Method (Asyn. Or Syn.)	Delivery Medium (Audio, Internet, Live, Text-Based, Video)
Lecture						
Recitation						
Presentation	120	1	15	100	Syn	Classroom
Laboratory						
Lab Prep						
Studio						
Distance						
Clinic						
Experiential						
Research						
Ind. Study						
Pract/Observ						

Cross-Listed Courses

COURSE DESCRIPTION (INCLUDE REQUISITES):

A seminar series on mechanical engineering career options and guidance, professional development and licensing, and preparation for the Fundamental of Engineering (FE) examination. Prerequisites: ME 372 or senior standing. Co-requisites: ME 482, ME 344

Calumet Department Head _____	Date _____	Calumet School Dean _____	Date _____
Fort Wayne Department Head _____	Date _____	Fort Wayne School Dean _____	Date _____
 _____	1/19/09	H.U. Akay	1-20-09
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 _____	Date _____

PURDUE SCHOOL OF ENGINEERING & TECHNOLOGY OUTCOMES AND ASSESSMENT DATA SHEET

This is an internal document to identify and record expected outcomes and anticipated assessment strategies for all courses taught within the School of Engineering and Technology. Submission of this form, as noted below, is required and must accompany all new course and course change requests. Copies of this form should also be retained within the department and kept on file with the outline or syllabus for each course.

Course Number: ME 405 Course Title: Seminar & Fundamentals of Engineering Review

Procedure:

First, identify all instructional outcomes expected for this course, and then select all ABET outcomes which are consistent with those anticipated objectives from TABLE 1 below.

TABLE 1 - ABET OUTCOMES

ENGINEERING - EAC Criteria #3	#
An ability to apply knowledge of mathematics, science, and engineering	a
An ability to design and construct experiments as well as to analyze and interpret data.	b
An ability to design a system, component, or process to meet desired needs.	c
An ability to function on multi-disciplinary teams.	d
An ability to identify, formulate and solve engineering problems.	e
An understanding of professional and ethical responsibility.	f
An ability to communicate effectively.	g
The broad education necessary to understand the impact of engineering solutions in global societal context.	h
A recognition of the need for and ability to engage in life-long learning.	i
A knowledge of contemporary issues.	j
An ability to use the techniques, skill and modern engineering tools necessary for engineering practice.	k

Subsets for each of the six IUPUI Principles of Undergraduate Learning (PUL) are given on the reverse side in TABLE 2. Using a number corresponding to each ABET outcome identified from TABLE 1 above to select a column, place a "" or "X" mark in the applicable TABLE 2 row(s) cell for each PUL. Courses will often address multiple ABET outcomes and ABET outcomes frequently will overlap more than one PUL subset. Thus, it is expected completed data sheets may contain marks in several cells thereby indicating the course simultaneously satisfies multiple Principles of Undergraduate Learning while fulfilling its intended ABET objective(s).

After completing TABLE 2, briefly define or explain how the course outcomes or objectives will be evaluated within the context of the departmental assessment program in the space below:

Course outcomes related to program outcomes a, e, and f will be assessed by a comprehensive examination, which is specifically designed to measure program outcomes directly.

Outcomes related to program outcomes a and i will be assessed through surveys.

Submitted By: Razi Nalim Date: 9-25-08

TABLE 2 - MATRIX OF EXPECTED COURSE OUTCOMES

(Suggestion - while completing Table 2, place a copy of the ABET outcomes from Table 1 along side for easy cross referencing.)

PRINCIPLES OF UNDERGRADUATE LEARNING - "Require all students to demonstrate an ability to:"	ENGINEERING OUTCOMES - EAC CRITERIA #3: items (a) to (k)										
	a	b	c	d	e	f	g	h	i	j	k
1(a) - Express ideas and facts effectively in written formats							x				
1(b) - Comprehend, interpret, and analyze texts											
1(c) - Communicate orally in one-on-one and group settings							x				
1(d) - Solve problems that are quantitative in nature	x				x						
1(e) - Make efficient use of information resources and technology for personal and professional needs								x			
2(a) - Analyze complex issues and make informed decisions	x				x						
2(b) - Synthesize information in order to arrive at reasoned conclusions	x				x						
2(c) - Evaluate the logic, validity, and relevance of data	x				x						
2(d) - Solve challenging problems	x				x		x				
2(e) - Use knowledge and understanding to generate and explore new questions	x				x					x	
3(a) - Apply knowledge to enhance personal lives	x				x	x					
3(b) - Apply knowledge to meet professional standards and competencies						x				x	
3(c) - Apply knowledge to further the goals of society					x	x					
4(a) - Demonstrate substantial knowledge and understanding of at least one field of study	x				x						
4(b) - Compare and contrast approaches to knowledge in different disciplines										x	
4(c) - Modify their approach to an issue or problem based on the contexts and requirements of particular situations					x					x	
5(a) - Compare and contrast the range of diversity and universality in human history, societies, and ways of life											
5(b) - Analyze and understand the interconnectedness of global and local concerns										x	
5(c) - Operate with civility in a complex social world						x					
6(a) - Make informed and principled choices regarding conflicting situations in their personal and public lives and to foresee the consequences of these choices								x			
6(b) - Recognize the importance of aesthetics in their personal lives and to society									x	x	

DRAFT SYLLABUS

ME 405 Seminar & Fundamentals of Engineering Review

Credits: 1 cr

Offered: Spring

Course Type/Class: Presentation (120 min/wk)

Prerequisites: ME 372 or senior standing

Co-requisites: ME 482, ME 344

Textbooks:

- 1) Michael R. Lindeburg, FE Review Manual: Rapid Preparation for the General FE Exam
- 2) FE Supplied-Reference Handbook (free download www.ncees.org)
- 3) FE Sample Questions & Solutions - General (NCEES)

Description: A seminar series on mechanical engineering career options and guidance, professional development and licensing, and preparation for the Fundamental of Engineering (FE) examination.

Goals:

- a) To introduce students to current topics relevant to mechanical engineering. Seminar topics include interviewing, management evaluation of engineers, career options.
- b) To prepare students for the FE examination in Indiana.

Outcomes:

Upon successful completion of the course, students should be able to

1. Describe the process of licensing and registration of professional engineers. [f,k3]
2. Pass the practice FE exam. [a1,a2,a4,c1,c2,e,f,h]
3. Describe interviewing and job application skills, and professional goals. [g,f,i]
4. Describe management expectations of engineers. [f,j]
5. Describe technical and business subjects as covered by various speakers [e,f,i,h]
6. Describe a range of career and graduate school opportunities. [i]

Assessment:

1. Condensed sample FE examination (~3 hrs, early April)
2. Essays or quizzes on seminar topics

Topics:

1. Seminar topics TBD (4 weeks) to include: interviewing and job application skills, and professional goal setting, career and graduate school opportunities, management expectations of engineers, technical and business subjects as covered by various speakers.
2. FE exam preparation (10 weeks) on: Physics & Chemistry, Mathematics, Statics, Dynamics, Fluid mechanics, Thermodynamics, Mechanics of Materials, Material Science, Electrical Circuits and Machinery, Computer Science, Control Systems, Engineering Economics

Useful websites for FE exam prep: www.ncees.org, ppi2pass.com/ppi/ECMain (exam cafe), www.engineeringlicense.com/feexam/preparation.php, www.eitexam.com, feexam.ou.edu