New Course Request

Check Appropriate Boxes: Undergraduate credit [✓] Graduate credit [ ] Professional credit [ ]

1. School/Division School of Engineering and Technology
2. Academic Subject Code ECE
3. Course Number 488 (must be cleared with University Enrollment Services)
4. Instructor
5. Course Title Senior Design II

Recommended Abbreviation (Optional) Senior Design II

(Limited to 32 Characters including spaces)

6. First time this course is to be offered (Semester/Year): Spring 2009
7. Credit Hours: Fixed at [ ] 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:

P: ECE 487, Senior Design I. A real-life experience in engineering problem solving in a group setting from identification, planning and execution to professional-quality written and oral presentations. This is the second semester of a two semester course sequence.

11. Lecture Contact Hours: Fixed at [ ] or Variable from [ ] to [ ]
12. Non-Lecture Contact Hours: Fixed at [ ] or Variable from [ ] to [ ]
13. Estimated enrollment: [ ] of which [ ] percent are expected to be graduate students.
14. Frequency of scheduling: Spring/Fall Will this course be required for majors? Yes [ ]
15. Justification for new course: Needed to create a two semester senior design course in ECE.
16. Are the necessary reading materials currently available in the appropriate library? Yes [ ]
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 3/20/2008

Department Chairman/Division Director

Approved by: [Signature] Date 4/16/2008

Dean

Dean of Graduate School (when required)

Date

Chancellor/Vice-President

Date

University Enrollment Services

Date

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.

UPS 724 University Enrollment Services Final—White; Chancellor/Vice-President—Blue; School/Division—Yellow; Department/Division—Pink; University Enrollment Services Advance—White
PURDUE SCHOOL OF ENGINEERING & TECHNOLOGY
COURSE 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: 488  Course Title: Senior Design II

Procedure:

1. 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>
<thead>
<tr>
<th>ENGINEERING - EAC Criteria #3</th>
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<tbody>
<tr>
<td>An ability to apply knowledge of mathematics, science and engineering.</td>
<td>a</td>
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<tr>
<td>An ability to design and construct experiments as well as to analyze and interpret data.</td>
<td>b</td>
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<tr>
<td>An ability to design a system, component, or process to meet desired needs.</td>
<td>c</td>
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<td>An ability to function on multi-disciplinary teams.</td>
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<td>An ability to identify, formulate and solve engineering problems.</td>
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<td>An understanding of professional and ethical responsibility.</td>
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<td>An ability to communicate effectively.</td>
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<tr>
<td>The broad education necessary to understand the impact of engineering solutions in global societal context.</td>
<td>h</td>
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<tr>
<td>A recognition of the need for and an ability to engage in life-long learning.</td>
<td>i</td>
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<tr>
<td>A knowledge of contemporary issues.</td>
<td>j</td>
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<tr>
<td>An ability to use the techniques, skill and modern engineering tools necessary for engineering practice.</td>
<td>k</td>
</tr>
</tbody>
</table>

2. 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 "V" 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).

3. 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:

   A Course outcome survey will be completed by both students and faculty. Changes made based on survey results used to grade presentation and final papers.

Submitted by: Russell E, Instructor  Date: 3/19/08
### 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:"
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<tbody>
<tr>
<td>1(a) - Express ideas and facts effectively in written formats</td>
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<td>1(b) - Comprehend, interpret, and analyze texts</td>
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<td>1(c) - Communicate orally in one-on-one and group settings</td>
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<td>1(d) - Solve problems that are quantitative in nature</td>
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<td>1(e) - Make efficient use of information resources and technology for personal and professional needs</td>
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<td>2(a) - Analyze complex issues and make informed decisions</td>
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<td>2(b) - Synthesize information in order to arrive at reasoned conclusions</td>
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<td>2(c) - Evaluate the logic, validity, and relevance of data</td>
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<td>2(d) - Solve challenging problems</td>
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<tr>
<td>2(e) - Use knowledge and understanding to generate and explore new questions</td>
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<td>3(a) - Apply knowledge to enhance personal lives</td>
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<tr>
<td>3(b) - Apply knowledge to meet professional standards and competencies</td>
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<td>3(c) - Apply knowledge to further the goals of society</td>
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<td>4(a) - Demonstrate substantial knowledge and understanding of at least one field of study</td>
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<td>4(b) - Compare and contrast approaches to knowledge in different disciplines</td>
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<td>4(c) - Modify their approach to an issue or problem based on the contexts and requirements of particular situations</td>
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<td>5(a) - Compare and contrast the range of diversity and universality in human history, societies, and ways of life</td>
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<td>5(b) - Analyze and understand the interconnectedness of global and local concerns</td>
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<td>5(c) - Operate with civility in a complex social world</td>
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<td>6(a) - Make informed and principles choices regarding conflicting situations in their personal and public lives and to foresee the consequences of these choices</td>
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<td>6(b) - Recognize the importance of aesthetics in their personal lives and to society</td>
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**Purdue University**  
**Request for Addition, Expiration, or Revision of an Undergraduate Course**  
(100-400 Level)

**Department:** Electrical and Computer Engineering  
**Effective Session:** Spring 2009

**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:** ECE  
- **Course Number:** 488

**Existing:**

- **Subject Abbreviation:**  
- **Course Number:**

**Long Title:** Senior Design II  
**Short Title:** Senior Design II

**Credit Type:**

1. Fixed Credit: 2 Cr.
2. Variable Credit Range:  
   - Minimum Cr.:  
   - Maximum Cr.:
3. Equivalent Credit: Yes
4. Thesis Credit: Yes

**Course Attributes:**

- Pass/Not Pass Only
- Satisfactory/Unsatisfactory Only
- Repeatable
- Maximum Repeatable Credit:  
- Credit by Examination
- Designator Required
- Special Fees

**Instructional Type:**

- Lecture
- Recitation
- Presentation
- Laboratory
- Lab Prep
- Studio
- Distance
- Clinic
- Experiential
- Research
- Ind. Study
- Pract/Obsev

**Course Description:**

P: ECE 487, Senior Design I. A real-life experience in engineering problem solving in a group setting from identification, planning and execution to professional-quality written and oral presentations. This is the second semester of a two semester course sequence.

**Campus(es) Involved:**

- Calumet
- Cont. Ed
- Tech Statewide
- Ind. Tech
- N. Central
- W. Lafayette

**Terms Offered:**

- Summer
- Fall
- Spring

**Cross-Listed Courses:**

**Calumet Department Head:**

- Date: [Signature]

**Calumet School Dean:**

- Date: [Signature]

**Fort Wayne Department Head:**

- Date: 3/14/08  
- [Signature]

**Fort Wayne School Dean:**

- Date: 4/14/08  
- [Signature]

**Indianapolis Department Head:**

- Date: [Signature]

**Indianapolis School Dean:**

- Date: [Signature]

**North Central Department Head:**

- Date: [Signature]

**North Central Chancellor:**

- Date: [Signature]

**West Lafayette Department Head:**

- Date: [Signature]

**West Lafayette College/School Dean:**

- Date: [Signature]

**West Lafayette Registrar:**

- Date: [Signature]

**Office of the Registrar**