New Course Request

Indiana University

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: ECE 262 (must be cleared with University Enrollment Services)
4. Instructor:

5. Course Title: Programming for Engineers
   Recommended Abbreviation (Optional): (Limited to 32 Characters including spaces)

6. First time this course is to be offered (Semester/Year): Spring 2009
7. Credit Hours: Fixed at 4 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:
    Prerequisites: ENGR 195, ENGR 196.
    Introduction to programming, problem solving, and the C programming language.

11. Lecture Contact Hours: Fixed at 3 or Variable from _______ to _______
12. Non-Lecture Contact Hours: Fixed at 3 or Variable from _______ to _______
13. Estimated enrollment: 30 of which 0 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: Reorganization of two (2cr) courses into a single programming course with integrated 3 hr lab
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 4/06/08

[Dean]

[Signature] Date

[Chancellor/Vice-President]

[Signature] 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.

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: ECE 262 Course Title: Programming for Engineers

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

Every semester student self-assess their ability for each outcome in a survey. Instructor completes a survey as well. If student averages don't exceed a threshold, instructor must complete report to address difference.

Submitted by: Brian King Date: 3/4/08
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.)

<table>
<thead>
<tr>
<th>PRINCIPLES OF UNDERGRADUATE LEARNING - Require All Students to Demonstrate An Ability to:</th>
<th>ENGINEERING OUTCOMES - EAC CRITERIA NO: items (a) to (k)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1(a) - Express ideas and facts effectively in written form.</td>
<td></td>
</tr>
<tr>
<td>1(b) - Comprehend, interpret, and analyze texts.</td>
<td></td>
</tr>
<tr>
<td>1(c) - Communicate orally in one-on-one and group settings.</td>
<td></td>
</tr>
<tr>
<td>1(d) - Solve problems that are quantitative in nature.</td>
<td></td>
</tr>
<tr>
<td>1(e) - Make efficient use of information resources and technology for personal and professional needs.</td>
<td></td>
</tr>
<tr>
<td>2(a) - Analyze complex issues and make informed decisions.</td>
<td></td>
</tr>
<tr>
<td>2(b) - Synthesize information in order to arrive at reasoned conclusions.</td>
<td></td>
</tr>
<tr>
<td>2(c) - Evaluate the logic, validity, and relevance of data.</td>
<td></td>
</tr>
<tr>
<td>2(d) - Solve challenging problems.</td>
<td></td>
</tr>
<tr>
<td>2(e) - Use knowledge and understanding to generate and explore new questions.</td>
<td></td>
</tr>
<tr>
<td>3(a) - Apply knowledge to enhance personal lives.</td>
<td></td>
</tr>
<tr>
<td>3(b) - Apply knowledge to meet professional standards and competencies.</td>
<td></td>
</tr>
<tr>
<td>3(c) - Apply knowledge to further the goals of society.</td>
<td></td>
</tr>
<tr>
<td>4(a) - Demonstrate substantial knowledge and understanding of at least one field of study.</td>
<td></td>
</tr>
<tr>
<td>4(b) - Compare and contrast approaches to knowledge in different disciplines.</td>
<td></td>
</tr>
<tr>
<td>4(c) - Modify their approach to an issue or problem based on the contexts and requirements of particular situations.</td>
<td></td>
</tr>
<tr>
<td>5(a) - Compare and contrast the range of diversity and universality in human history, societies, and ways of life.</td>
<td></td>
</tr>
<tr>
<td>5(b) - Analyze and understand the interconnectedness of global and local concerns.</td>
<td></td>
</tr>
<tr>
<td>5(c) - Operate with civility in a complex social world.</td>
<td></td>
</tr>
<tr>
<td>6(a) - Make informed and principled choices regarding conflicting situations in their personal and public lives and to foresee the consequences of these choices.</td>
<td></td>
</tr>
<tr>
<td>6(b) - Recognize the importance of aesthetics in their personal lives and to society.</td>
<td></td>
</tr>
</tbody>
</table>
PURDUE UNIVERSITY
REQUEST FOR ADDITION, EXPIRATION,
OR REVISION OF AN UNDERGRADUATE COURSE
(100-400 LEVEL)

DEPARTMENT: Electrical and Comp. Engineering  EFFECTIVE SESSION:

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:  EXISTING:  TERMS OFFERED:
Subject Abbreviation: ECE  Subject Abbreviation:  Check All That Apply:
Course Number: 262  Course Number:  
Long Title: Programming for Engineers  TERMS OFFERED:  CAMPUS(ES) INVOLVED:
Short Title:  Abbreviated title will be entered by the Office of the Registrar if limited. (22 CHARACTERS ONLY)

CAMPUS(ES) INVOLVED:

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

SUMMER  FALL  SPRING

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

INSTRUCTIONAL TYPE:
Lecture 75  2  15  75  Live
Practical
Presentation
Laboratory 180  1  25
Lab Prep
Studio
Distance
Clinic
Experiential
Research
Ind. Study
Precalculus

COURSE ATTRIBUTES: Check All That Apply
1. Pass/No Pass Only
2. Satisfactory/Unsatisfactory Only
3. Repeatable
4. Maximum Repeatable Credit:
5. Credit by Examination
6. Designator Required
7. Registration Approval Type
8. Variable Title
9. Remedial
10. Honors
11. Full Time Privilege
12. Off Campus Experience

COURSE DESCRIPTION (INCLUDE REQUISITES):

Prerequisites: ENGR 195, ENGR 196. Introduction to programming, problem solving and the C programming language

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:  Date:

OFFICE OF THE REGISTRAR