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

DEPARTMENT School of Electrical and Computer Engineering (EFD 82-07)
EFFECTIVE SESSION Fall 2010

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

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>New course with supporting documents</td>
</tr>
<tr>
<td>2.</td>
<td>Add existing course offered at another campus</td>
</tr>
<tr>
<td>3.</td>
<td>Expiration of a course</td>
</tr>
<tr>
<td>4.</td>
<td>Change in course number</td>
</tr>
<tr>
<td>5.</td>
<td>Change in course title</td>
</tr>
<tr>
<td>6.</td>
<td>Change in course credit/type</td>
</tr>
<tr>
<td>7.</td>
<td>Change in course attributes (department head signature only)</td>
</tr>
<tr>
<td>8.</td>
<td>Change in instructional hours</td>
</tr>
<tr>
<td>9.</td>
<td>Change in course description</td>
</tr>
<tr>
<td>10.</td>
<td>Change in course requisites</td>
</tr>
<tr>
<td>11.</td>
<td>Change in semesters offered (department head signature only)</td>
</tr>
<tr>
<td>12.</td>
<td>Transfer from one department to another</td>
</tr>
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PROPOSED:

<table>
<thead>
<tr>
<th>Subject Abbreviation</th>
<th>ECE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Number</td>
<td>37900</td>
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<tr>
<td>Long Title</td>
<td>Junior Participation in Vertically Integrated Projects (VIP) in Electrical and Computer Engineering</td>
</tr>
<tr>
<td>Short Title</td>
<td>Junior Part in VIP in ECE</td>
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</table>

EXISTING:

<table>
<thead>
<tr>
<th>Subject Abbreviation</th>
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</thead>
<tbody>
<tr>
<td>Course Number</td>
</tr>
</tbody>
</table>

TERMS OFFERED:

<table>
<thead>
<tr>
<th>Check All That Apply</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer</td>
</tr>
</tbody>
</table>

CAMPUS(ES) INVOLVED:

| Calumet | Cont Ed | Ft. Wayne | Tech Statewide | Indianapolis | W. Lafayette |

CREDIT TYPE

<table>
<thead>
<tr>
<th>1. Fixed Credit: Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Cr. Hrs (Check One) To</td>
</tr>
<tr>
<td>Maximum Cr. Hrs</td>
</tr>
<tr>
<td>Equivalent Credit: Yes No</td>
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</table>

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

<table>
<thead>
<tr>
<th>Lecture</th>
<th>Recitation</th>
<th>Presentation</th>
<th>Laboratory</th>
<th>Lab Prep</th>
<th>Studio</th>
<th>Distance</th>
<th>Clinic</th>
<th>Experiential</th>
<th>Research</th>
<th>Ind. Study</th>
<th>Pract/Observ</th>
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</thead>
<tbody>
<tr>
<td>Minutes Per Mtg</td>
<td>Meetings Per Week</td>
<td>Weeks Offered</td>
<td>% of Credit Allocated</td>
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<td>50</td>
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<td>10</td>
<td>100</td>
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<td></td>
</tr>
</tbody>
</table>

COURSE DESCRIPTION (INCLUDE REQUISITES/RESTRICTIONS):

See attachment

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

31/12/10
PURDUE UNIVERSITY
REQUEST FOR ADDITION, EXPIRATION,
OR REVISION OF AN UNDERGRADUATE COURSE
(10000-49999 LEVEL)

DEPARTMENT: School of Electrical and Computer Engineering (ECE 82-07) EFFECTIVE SESSION Fall 2010

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

- [X] New course with supporting documents
- [ ] Add existing course offered at another campus
- [ ] Expiration of a course
- [ ] Change in course number
- [ ] Change in course title
- [ ] Change in course credit type
- [ ] Change in course attributes (department head signature only)
- [ ] Change in instructional hours
- [ ] Change in course description
- [ ] Change in course prerequisites
- [ ] Change in semesters offered (department head signature only)
- [ ] Transfer from one department to another

PROPOSED: Subject Abbreviation ECE
Course Number 37900
Long Title Junior Participation in Vertically Integrated Projects (VIP) in Electrical and Computer Engineering
Short Title Junior Part in VIP in ECE

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

CAMPUS(ES) INVOLVED
- Calumet
- Cont Ed
- Ft. Wayne
- Indianapolis [X] W. Lafayette

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

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

COURSE ATTRIBUTES: Check All That Apply
1. Pass/Not Pass Only
2. Satisfactory/Uncertain Only
3. Repeatable
4. Credit by Examination
5. Special Fees
6. Registration Approval Type Department [ ] Instructor [X]
7. Variable Title
8. Honors
9. Full Time Privilege
10. Off Campus Experience

Schedule Type
Lecture Minutes Per Mtg. 50
Recitation Meetings Per Week 3
Presentation
Laboratory

Lab Prep
Studio
Distance
Clinic
Experiential
Research
Ind. Study
Pract/Observ

Course Description (Include Requisites/Restrictions):
See attachment

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
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OFFICE OF THE REGISTRAR
This course provides an opportunity for undergraduate students to explore and develop comprehensive applications of electrical and computer engineering technologies, especially as they relate to active research areas of Purdue faculty members. Students will learn about the underlying research, and will work on teams to formulate applications of the research that address real-world needs. Students will attend a weekly lecture that provides an introduction to a broad range of applicable technologies and development tools – some associated with the activities of specific teams, and some addressing topics of more general value to students enrolled in the course.

Restrictions: Must be enrolled in the School of Electrical and Computer Engineering

Prerequisites: Junior standing
TO: The Engineering Faculty
FROM: The Faculty of the School of Electrical and Computer Engineering
RE: New Undergraduate Level Course: ECE 379

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

ECE 379  
**Junior Participation in Vertically Integrated Projects (VIP) in Electrical and Computer Engineering**  
Sem: 1 and 2. Class: 1; Lab: 0 or 1; Credit: 1 or 2.
Prerequisite: Junior Standing in Engineering.

This course provides an opportunity for undergraduate students to explore and develop comprehensive applications of electrical and computer engineering technologies, especially as they relate to active research areas of Purdue faculty members. Students will learn about the underlying research, and will work on teams to formulate applications of the research that address real-world needs. Students will attend a weekly lecture that provides an introduction to a broad range of applicable technologies and development tools – some associated with the activities of specific teams, and some addressing topics of more general value to students enrolled in the course.

**Reason:**

This course will provide an opportunity for students to apply the concepts that they are learning in their classes to the solution of real-world problems that are aligned with the research interests of Purdue faculty members. It provides a structured environment for design activities that engage students in team-work under the guidance of faculty members and graduate students. Presently, there is no course offering within ECE that provides this opportunity. The most similar courses are those associated with EPICS; but in contrast to EPICS, VIP focuses on design tasks related to research issues and research applications, rather than providing technology solutions to community needs.

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Approved for the Faculty of the Schools of Engineering by the Engineering Curriculum Committee

ECC Minutes 4/14

Date 1/22/10

Chairman ECC [Signature]
Supporting Documentation

Required Text: None.

Recommended References: None.

Course Outcomes: A student who successfully fulfills the course requirements will have demonstrated:

i. an ability to apply knowledge of electrical and computer engineering to the design of applications solutions.. [1,3,4,5,7;a,b,c,l,k]
ii. an understanding of design as a start-to-finish process.. [3m4;b,c,e,k]
iii. an awareness of the customer in engineering design.. [6,7;c,f,g,h,j c,f,g,h,j]
iv. an ability to function as part of a team and an appreciation for the contributions of other individuals on the team.. [6,d,f,g,h]
v. an ability to communicate effectively with both technical and non-technical audiences.. [6,d,g]

Assessment of Outcomes: Each student will be required to keep his or her own design notebook. Students will be evaluated individually and as part of their team on the basis of their design notebooks, midterm and final design presentations, homework assignments that will be collected and graded, and final oral examinations conducted by faculty team advisors.