To: The Faculty of the College of Engineering

From: The Faculty of the School of Electrical and Computer Engineering

RE: Deletion of ECE 35700, ECE 40700, ECE 42500, ECE 43400, ECE 44500, ECE 48600

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

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**ECE 35700 VLSI Chip Design Laboratory**
Sem. 1, 2 Cr. 1.00
Introduction to standard cell design of VLSI digital circuits. Laboratory experiments using commercial grade CAD tools for VHDL based design, schematic based logic entry, logic and VHDL simulation, automatic placement and routing, timing analysis, and testing.

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**ECE 40700 Semiconductor Measurements Laboratory**
Sem. 1, 2 Cr. 1.00
Experiments incorporating state-of-the-art equipment and measurement techniques are performed to collect electrical characteristics exhibited by a representative set of semiconductor devices. The measured characteristics are subsequently used to deduce information about the internal nature and/or operation of semiconductor devices.

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**ECE 42500 Electric Machines**
Sem. 1 Cr. 2.00
A study of the energy conversion principles and operating behavior of ac and dc electric machines. Considers engineering aspects of practical machines. Examines industrial methods of starting and controlling these machines.

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**ECE 43400 Power Engineering Laboratory**
Sem. 1 Cr. 1.00
The laboratory consists of experiments on power measurement techniques, power flow control, and on common components, such as transformers, rectifiers, induction and synchronous machines.

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

ECC Minutes Date: 11/20/15
Chairman ECC
ECE 44500 Modern Filter Design
Sem. 1 Cr. 0 or 4.00

ECE 48600 Sensor-Based Robot Control Laboratory
Sem. 1 Cr. 2.00
Laboratory experiments and projects illustrate the techniques and concepts of integrating sensory information into a real-time, computer-controlled robotic system. Topics include manipulator kinematics, simple computer vision techniques, searching & game trees, and system communications.

REASON: To remove outdated course listings from the course catalog. None have been offered in the last five years. ECE 35700 was last offered in spring 2001. ECE40700 was last taught in fall 2009. ECE 42500 last had students in 2004, but was offered in fall 2006 and cancelled. ECE 43400 was last offered in fall 1999. ECE44500 last had students in fall 2007, but was offered in fall 2009 and cancelled. ECE 48600 was last offered in spring 1999. These courses are not to be used for future registrations.

V. Raghu Balakrishnan, Head
School of Electrical and Computer Engineering
**PURDUE UNIVERSITY**
REQUEST FOR ADDITION, EXPIRATION, OR REVISION OF AN UNDERGRADUATE COURSE
(10000-40000 LEVEL)

**DEPARTMENT**: School of Electrical and Computer Engineering  
**EFFECTIVE SESSION**: 201620

**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 prerequisites
11. Change in semesters offered (department head signature only)
12. Transfer from one department to another

**PROPOSED**

<table>
<thead>
<tr>
<th>Subject Abbreviation</th>
<th>Course Number</th>
<th>Long Title</th>
<th>Short Title</th>
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**EXISTING**

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**TERMS OFFERED**

- [ ] Summer
- [ ] Fall
- [ ] Spring

**CAMPUS(ES) INVOLVED**

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

**CREDIT TYPE**

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

**COURSE ATTRIBUTES**

1. Pass/Not Pass Only
2. Satisfactory/Unsatisfactory Only
3. Repeatable
4. Maximum Repeatable Credit:
5. Fees [ ] Coop [ ] Lab [ ] Rate Request
6. Registration Approval Type
   - [ ] Department
   - [ ] Instructor
7. Variable Title
8. [ ] Honors
9. Full Time Privilege
10. Off Campus Experience

**SCHEDULE Type**

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

**MINUTES PER WEEK**

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**% OF CREDIT ALLOCATED**

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**COURSE DESCRIPTION (INCLUDE REQUISITES/RESTRICTIONS):**

****EXPRIE PWL ONLY****

**COURSE LEARNING OUTCOMES**

Cross-Listed Courses

**Calumet Department Head**

**Ft. Wayne Department Head**

**Indianapolis Department Head**

**North Central Faculty Senate Chair**

**West Lafayette Department Head**

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

DEPARTMENT: School of Electrical and Computer Engineering
EFFECTIVE SESSION: 201620

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: 40300
Long Title: 
Short Title: 

EXISTING:

Subject Abbreviation: 
Course Number: 
Long Title: 
Short Title: 

TERMS OFFERED:

☐ Summer ☐ Fall ☐ Spring

CAMPUS(ES) INVOLVED:

☒ Calumet ☐ Cont Ed ☐ Ft. Wayne ☒ W. Lafayette
☐ Tech Statewide

Abbreviated title will be entered by the Office of the Registrar if omitted. (50 CHARACTERS ONLY)

CREDIT TYPE:

1. Fixed Credit: Cr. Hrs. 
2. Variable Credit Range: 
   Minimum Cr. Hrs: (Check One) 
   Maximum Cr. Hrs: 
3. Equivalent Credit: ☐ Yes ☐ No 

COURSE ATTRIBUTES:

☐ 1. Pass/Not Pass Only
☐ 2. Satisfactory/Unsatisfactory Only
☐ 3. Repeatable
☐ 4. Credit by Examination
☐ 5. Fees ☐ coop ☐ Lab ☐ Rate Request

Schedule Type
Lecture Recitation Presentation Laboratory Lab Prep Studio Distance Clinic Experimental Research Ind. Study Pract/Observ

Minutes Per Mgr. Meetings Per Week Weeks % of Credit Offered Allocated

Cross-Listed Courses

COURSE DESCRIPTION (INCLUDE REQUIREMENTS/RESTRICTIONS):

*****EXPIRE PWL ONLY*****

*COURSE LEARNING OUTCOMES

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 Chair Date Vice Chancellor for Academic Affairs Date

West Lafayette Department Head Date West Lafayette College/School Dean Date

West Lafayette Registrar Date

OFFICE OF THE REGISTRAR
# PURDUE UNIVERSITY

## REQUEST FOR ADDITION, EXPIRATION, OR REVISION OF AN UNDERGRADUATE COURSE

### (10000-40000 LEVEL)

**DEPARTMENT:** School of Electrical and Computer Engineering  
**EFFECTIVE SESSION:** 201620

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

- [ ] 1. New course with supporting documents
- [x] 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
- [x] 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:** 41500
- **Long Title:**
- **Short Title:**

**PROPOSED CREDIT TYPE:**

1. **Fixed Credit: Cr. Hrs.**
2. **Variable Credit Range:**
   - Minimum Cr. Hrs (Check One)
   - Maximum Cr. Hrs
3. **Equivalent Cr.:** Yes No

**SCHEDULE TYPE:**

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

**MEETINGS PER WEEK:**

**MINUTES PER MEETING:**

**WEEKS OFFERED:**

**% OF CREDIT ALLOCATED:**

**COURSE ATTRIBUTES:**

1. Pass/Not Pass Only
2. Satisfactory/Unsatisfactory Only
3. Repeatability
4. Credit by Examination
5. Fees: Coop Lab Rate Request

**TERMS OFFERED:**

- [x] Summer
- [x] Fall
- [x] Spring

**CAMPUS(ES) INVOLVED:**

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

**COURSE DESCRIPTION (INCLUDE REQUISITES/RESTRICTIONS):**

"*****EXPIRE PWL ONLY*****"

**COURSE LEARNING OUTCOMES:**

### SIGNATURES:

- Calumet Department Head
- Calumet School Dean
- Fort Wayne Department Head
- Fort Wayne School Dean
- Indianapolis Department Head
- Indianapolis School Dean
- North Central Faculty Senate Chair
- Vice Chancellor for Academic Affairs
- West Lafayette Department Head
- West Lafayette College/School Dean
- West Lafayette Registrar

**OFFICE OF THE REGISTRAR**
### PURDUE UNIVERSITY
REQUEST FOR ADDITION, EXPIRATION,
OR REVISION OF AN UNDERGRADUATE COURSE
(10000-40000 LEVEL)

**DEPARTMENT:** School of Electrical and Computer Engineering  
**EFFECTIVE SESSION:** 201620

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

- [ ] New course with supporting documents
- [ ] Add existing course offered at another campus
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- [ ] Change in course attributes (department head signature only)
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- [ ] Change in course description
- [ ] Change in course requisites
- [ ] Change in semesters offered (department head signature only)
- [ ] Transfer from one department to another

**PROPOSED:**

- **Subject Abbreviation:** 
- **Course Number:** 
- **Long Title:** 
- **Short Title:**

**EXISTING:**

- **Subject Abbreviation:** ECE
- **Course Number:** 43400
- **Long Title:**
- **Short Title:**

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

**TERMS OFFERED:**

- [x] Summer
- [ ] Fall
- [x] Spring

**CAMPUS(ES) INVOLVED:**

- [ ] Calumet
- [ ] Fort Wayne
- [ ] Indianapolis
- [ ] N. Central
- [ ] Tech Statewide
- [ ] W. Lafayette

### CREDIT TYPE

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<th>Credit Type</th>
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<td>Maximum Cr. Hrs.</td>
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<td>No</td>
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**Credit Type:**

- [ ] Pass/Not Pass Only
- [ ] Satisfactory/Unsatisfactory Only
- [ ] Repeatable
- [ ] Maximum Repeatable Credit: [ ]
- [ ] 8 Honors
- [ ] 9 Full Time Privilege
- [ ] 10 Off Campus Experience

**Schedule Type:**

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

**Meetings Per Week:**

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<th>Lecture</th>
<th>Recitation</th>
<th>Presentation</th>
<th>Laboratory</th>
<th>Lab Prep</th>
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<th>Distance</th>
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<th>Experiential</th>
<th>Research</th>
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**Weeks Offered:**

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<th>% of Credit Allocated</th>
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**COURSE DESCRIPTION (INCLUDE REQUIREMENTS):**

****EXPIRE PWL ONLY****

**COURSE LEARNING OUTCOMES**

**Cross-Listed Courses**

### Signature

**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 Chair**

- Date

**Vice Chancellor for Academic Affairs**

- Date

**West Lafayette Department Head**

- Date

**West Lafayette College/School Dean**

- Date

**West Lafayette Registrar**

- Date

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

DEPARTMENT: School of Electrical and Computer Engineering
EFFECTIVE SESSION: 201620

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
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☐ 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: 445.00
Long Title: 
Short Title: 

EXISTING:

Subject Abbreviation: 
Course Number: 
Long Title: 
Short Title: 

TERMS OFFERED:
Check All That Apply:
☐ Summer
☐ Fall
☐ Spring

CAMPUS(ES) INVOLVED:
☐ Calumet
☐ Cont Ed
☐ Ft. Wayne
☐ Tech StateWide
☐ W. Lafayette
☐ Indianapolis

Abbreviated title will be entered by the Office of the Registrar if approved. (20 characters only)

CREDIT TYPE

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

COURSE ATTRIBUTES: Check All That Apply

1. Pass/Not Pass Only 
2. Satisfactory/Unsatisfactory Only 
3. Repeatable 
4. Credit by Examination 
5. Fees Coop Lab Rate Request 
6. Registration Approval Type 
7. Variable Title 
8. Honors 
9. Full Time Privilege 
10. Off Campus Experience 

Include comment to explain fee

Schedule Type
Lecture Recitation Presentation Laboratory Lab Prep Studio Distance Clinic Experiential Research Ind. Study Pract/Observ

Minutes Per Mtg Meetings Per Week Weeks Offered % of Credit Allocated

Cross-Listed Courses

COURSE DESCRIPTION (INCLUDE REQUIREMENTS/RESTRICTIONS):

****EXPIRE PWL ONLY****

*COURSE LEARNING OUTCOMES

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 Chair Date Vice Chancellor for Academic Affairs Date

West Lafayette Department Head Date West Lafayette College/School Dean Date West Lafayette Registrar Date
**DEPARTMENT** School of Electrical and Computer Engineering

**EFFECTIVE SESSION** 201620

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

- [ ] 1. New course with supporting documents
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**Long Title**

**Short Title**

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

**TERMS OFFERED**

- [✓] Summer
- [✓] Fall
- [✓] Spring

**CAMPUS(ES) INVOLVED**

- [ ] Calumet
- [ ] Cont Ed
- [ ] Fl. Wayne
- [✓] W. Lafayette
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**CREDIT TYPE**

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<th>Meetings Per Week</th>
<th>Weeks Offered</th>
<th>% of Credit Allocated</th>
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<th>Pract/Observe</th>
<th>Cross-Listed Courses</th>
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| COURSE DESCRIPTION (INCLUDE REQUISITES/RESTRICTIONS): |

| *****EXPRIE PWL ONLY***** |

| COURSE LEARNING OUTCOMES |

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<th>Fort Wayne School Dean</th>
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<th>North Central Faculty Senate Chair</th>
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<th>West Lafayette Department Head</th>
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