

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

Print Form

Office of the Registrar
 FORM 40 REV. 5/11

DEPARTMENT ECE

EFFECTIVE SESSION Fall 2015

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

- | | |
|---|---|
| <input 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 checked="" type="checkbox"/> 6. Change in course credit/type | <input type="checkbox"/> 12. Transfer from one department to another |

PROPOSED:

EXISTING:

Subject Abbreviation _____ Subject Abbreviation ECE
 Course Number _____ Course Number 40200
 Long Title _____
 Short Title _____

TERMS OFFERED
 Check All That Apply:

Fall Spring Summer

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. (30 CHARACTERS ONLY)

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

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. Fees: Coop Lab Rate Request
 Include comment to explain fee
 6. Registration Approval Type Department Instructor
 7. Variable Title
 8. Honors
 9. Full Time Privilege
 10. Off Campus Experience

Schedule Type	Minutes Per Mtg	Meetings Per Week	Weeks Offered	% of Credit Allocated
Lecture	50	2	15	50
Recitation				
Presentation				
Laboratory	170	2	15	50
Lab Prep				
Studio				
Distance				
Clinic				
Experiential				
Research				
Ind. Study				
Pract/Observ				

Cross-Listed Courses

COURSE DESCRIPTION (INCLUDE REQUISITES/RESTRICTIONS):

***COURSE LEARNING OUTCOMES:**

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 Faculty Senate Chair _____ Date _____	Vice Chancellor for Academic Affairs _____ Date _____
West Lafayette Department Head <u>Jeffrey J. [Signature]</u> <u>10/10/14</u> Date	West Lafayette College/School Dean <u>[Signature]</u> <u>12/12/14</u> Date

West Lafayette Registrar _____ Date _____

OFFICE OF THE REGISTRAR

TO: The Faculty of the College of Engineering
FROM: The Faculty of the School of Electrical and Computer Engineering
RE: Change in Credit Hours for ECE 40200, Electrical Engineering Design Projects.

The faculty of the School of Electrical and Computer Engineering has approved a change in lecture hours and total credits in ECE 40200 to be effective for Fall 2015. This action is now submitted to the Engineering Faculty with a recommendation for approval.

From: ECE 40200 Electrical Engineering Design Projects

Sem. Fall, Spring; Cr. 3; Lecture 1; Lab 6.

Prerequisites: (ECE 20100, ECE 20200, ECE 20700, ECE 20800, ECE25500, ECE 27000, ECE 30100, ECE 30200, ECE 31100) OR (ECE 20100, ECE 20200, ECE 20700, ECE 20800, ECE 25500, ECE 26400, ECE 27000, ECE 30100, ECE 30200, ECE 33700, ECE 36200, ECE 36400, ECE 36800)

Restrictions: Must be enrolled in one of the following Colleges: School of Electrical & Computer Engineering

Description: Lecture sessions provide the student with background information on the design and management of projects. Formal lectures cover, for example, design for manufacturability, design for quality, test and evaluation, reliability and ethics, patents and copyrights, plus case studies. During the laboratory sessions, the students work in teams on a challenging open-ended electrical engineering project that draws on previous coursework. Projects routinely involve standard design facets (such as consideration of alternative solutions, feasibility considerations, and detailed system descriptions) and include a number of realistic constraints (such as cost, safety, reliability, and aesthetics).

To: ECE 40200 Electrical Engineering Design Projects

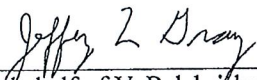
Sem. Fall, Spring; Cr. 4; Lecture 2; Lab 6.

Prerequisites: (ECE 20100, ECE 20200, ECE 20700, ECE 20800, ECE25500, ECE 27000, ECE 30100, ECE 30200, ECE 31100) OR (ECE 20100, ECE 20200, ECE 20700, ECE 20800, ECE 25500, ECE 26400, ECE 27000, ECE 30100, ECE 30200, ECE 33700, ECE 36200, ECE 36400, ECE 36800)

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Reason: This course change was approved by the ECE Curriculum Committee on October 1, 2014. The extra lecture time has been added to allow the introduction of pertinent technical background information and professional development topics (see the attached supplemental information).



on behalf of V. Balakrishnan, Head
School of Electrical and Computer Engineering

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

ECC Minutes 12/5/14 Date 12/5/14
Chairman ECC 

School of Electrical and Computer Engineering

Course Learning Objectives:

- i. An ability to apply knowledge obtained in earlier coursework and to obtain new knowledge necessary to design and test a system, component, or process to meet desired needs.
- ii. An understanding of the engineering design process.
- iii. An ability to function on an interdisciplinary team.
- iv. An awareness of professional and ethical responsibility.
- v. Effective communication skills, both oral and written.

PURDUE

UNIVERSITY

SCHOOL OF ELECTRICAL AND COMPUTER ENGINEERING DIRECTORATE OF LABORATORIES

Proposed Lecture Outline for ECE 40200 Electrical Engineering Design Projects

Week of	LECTURE 1	LECTURE 2
8/19	Ground Rules, Define Project	Prototype Construction Techniques and Static/Dynamic Evidence Capture
8/26	Course Project and Housekeeping	Schematic Capture for Simulation and PCB Design
9/2	Labor Day Holiday No Lecture	Design Strategies from ECE 207/208/270 & 362
9/9	OPR1 grading and diagrams, organization etc.	Analog Design Strategies: Linear/Non-linear
9/16	Communications (JL) Overhead presentation technique (JL)	Digital Design Strategies: FSMs/Combinatorial
9/23	PDR Preparation, etc. Safety	Mixed Signal – Crossing the Analog/Digital Divide
9/30	Feedback from Review Design Constraints, Dr. Carla Zoltowski	Advanced Oscilloscope Techniques
10/7	October Break Wed., Thu., Fri. labs meet	Passive Selection: Resistors and Inductors
10/14	Quality	Passive Selection: Capacitors
10/21	Discuss FDR, Orals	PCBs – the hidden component
10/28	Troubleshooting & TRIZ	Practical Power Supplies (Switching and Linear)
11/4	Assembly and Soldering	Practical Power Supplies, Batteries
11/11	Q&A regarding Oral Progress Report 3	<i>“Design as a Life Style”</i> Jim Eaton, HP Design Engineer (ret.)
11/18	Packaging	Reliability and Ethics
11/25	Case Studies Discuss written report Discuss final demo, ABET form	Thanksgiving Vacation
12/2	Patents and Copyrights John McNett, IP lawyer and senior partner.	EE Design Showcase