

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

DEPARTMENT ECE EFFECTIVE SESSION 201710

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 checked="" type="checkbox"/> 4. Change in course number | <input checked="" type="checkbox"/> 10. Change in course requisites |
| <input type="checkbox"/> 5. Change in course title | <input checked="" type="checkbox"/> 11. Change in semesters offered (department head signature only) |
| <input type="checkbox"/> 6. Change in course credit/type | <input type="checkbox"/> 12. Transfer from one department to another |

PROPOSED: Subject Abbreviation ECE EXISTING: Subject Abbreviation ECE

Course Number 30414 Course Number 41400

Long Title Elements of Electro and Fiber Optics

Short Title _____

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

TERMS OFFERED
Check All That Apply:
 Summer Fall Spring

CAMPUS(ES) INVOLVED
 Calumet N. Central
 Cont Ed Tech Statewide
 Ft. Wayne W. Lafayette
 Indianapolis

CREDIT TYPE

- Fixed Credit: Cr. Hrs. _____
- Variable Credit Range:
Minimum Cr. Hrs. _____
(Check One) To Or
Maximum Cr. Hrs. _____
- Equivalent Credit: Yes No

- Pass/Not Pass Only
 - Satisfactory/Unsatisfactory Only
 - Repeatable
Maximum Repeatable Credit: _____
 - Credit by Examination
 - Fees Coop Lab Rate Request
- Include comment to explain fee

COURSE ATTRIBUTES: Check All That Apply

- Registration Approval Type
Department Instructor
- Variable Title
- Honors
- Full Time Privilege
- Off Campus Experience

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

Cross-Listed Courses

COURSE DESCRIPTION (INCLUDE REQUISITES/RESTRICTIONS):

Restriction: Student must be enrolled in School of Electrical and Computer Engineering.
 Requisites: Undergraduate level ECE 30100 Minimum Grade of D- and Undergraduate level ECE 30411 Minimum Grade of D- (may be taken concurrently)
 Introduction to the use of lasers, fiber and integrated optical components and devices in communication and sensory applications. Topics include generation, transformation, modulation, deflection and detection of laser beams and their applications in fiber communication and sensory systems.

COURSE LEARNING OUTCOMES

- an ability to model laser beams and the transformation of laser beams.
- a knowledge of the operations of gas lasers, semiconductor lasers and light emitting diodes.
- a knowledge of optical detection schemes and the operations of optical detectors.
- an understanding of the optic fiber properties.
- a knowledge of key components of optical fiber communication systems.

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 _____
<i>Jeffrey L. King</i> West Lafayette Department Head	<i>1/29/16</i> Date	<i>Michael J. Hamlin</i> West Lafayette College/School Dean	<i>3/22/16</i> Date

West Lafayette Registrar _____ Date _____

To: The Faculty of the College of Engineering
From: The Faculty of the School of Electrical and Computer Engineering
RE: Changes to an existing course: ECE 41400 change in number, term offered and requisites.

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

FROM: ECE 41400 Elements of Electro and Fiber Optics
Sem. 2. Lecture 3, Credit 3
Restriction: Student must be enrolled in School of Electrical and Computer Engineering.
Requisites: Undergraduate level ECE 30100 Minimum Grade of D- and Undergraduate level ECE 31100 Minimum Grade of D-

Introduction to the use of lasers, fiber and integrated optical components and devices in communication and sensory applications. Topics include generation, transformation, modulation, deflection and detection of laser beams and their applications in fiber communication and sensory systems.

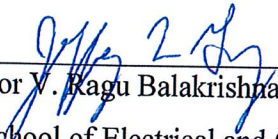
TO: ECE 30414 Elements of Electro and Fiber Optics
Sem. 1. Lecture 3, Credit 3
Restriction: Student must be enrolled in School of Electrical and Computer Engineering.
Requisites: Undergraduate level ECE 30100 Minimum Grade of D- and Undergraduate level ECE 30411 Minimum Grade of D- (may be taken concurrently)

Introduction to the use of lasers, fiber and integrated optical components and devices in communication and sensory applications. Topics include generation, transformation, modulation, deflection and detection of laser beams and their applications in fiber communication and sensory systems.

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

ECC Minutes 15 Date 2/22/16
Chairman ECC [Signature]

REASON: The change is intended to improve the progression of courses from the 20000 level to 30000 and 40000 level courses, for students who wish to focus their studies in the optics area and reflect similar changes, previously submitted to the Engineering Curriculum Committee, in ECE 30412 and ECE 30413. The requisites are changing to allow students to concurrently take ECE 31100, which is proposed to become ECE 30411. This course was previously offered only in spring semester and now will be offered only in fall semester. No other changes will be made.



For V. Ragu Balakrishnan, Head
School of Electrical and Computer Engineering

ECE 5-Digit Course Numbering

First Digit: Level

- 6 – Graduate only courses
- 5 – Dual level
- 4 – Senior Level
- 3 – Junior Level
- 2 – Sophomore Level
- 1 – First Year Level

2nd and 3rd Digits: ECE Area

- 00 – CNSIP
- 02 – Automatic Control
- 04 – Fields and Optics
- 06 – Microelectronics and Nanotechnology
- 08 – Computer Engineering
- 10 – Power and Energy Systems
- 12 – VLSI
- 14 – BIS

4th and 5th Digits:

Mostly arbitrary – keep in prereq order if possible within ECE area. When updating, use same last two digits, i.e. ECE 30500 → ECE 30605, etc.

Special Cases:

- X9595 for all experimental courses.
- X99XX for all seminar or similar courses
- XXX99 for all professional practice courses
- 490XX for all Sr. Design courses