ECE 4810 course change proposal 9-24-18

Date of request: 19-SEP-2018

Request ID: A-2018-ECE-40

College: A

Department: ECE

Initiator name: Raghvendra Gejji

Initiator email: raghe.gejji@wmich.edu

Proposed effective term: 201940

Does course need General Education approval?: N

Will course be used in teacher education?: N

If 5000 level course, prerequisites apply to: U

Proposed course data:
Change Course ECE 4810
Specific Course Change type selected: Pre or Co-requisites

1. Existing course prefix and number:
   ECE 4810

2. Existing course prerequisites:
   CAPP Restrictions:
   IEE 3160 Min grade = C and
   ECE 2510 Min grade = C and
   (Rule: COURSES: Prerequisites for a total of 1 conditions)
   ECE 3200 Min grade = C or ECE 3300 Min grade = C
   or
   (Rule: COURSES2: Prerequisites for a total of conditions)
   ECE 3550 Min grade = C and
   ECE 4510 Min grade = C

3. Proposed course prerequisites:
   IEE 3160 and ECE 2510 and ECE 3710, and either (ECE 3200 or ECE 3300) or (ECE 4525 and ECE 4510); with a grade of "C" or better required in all prerequisites.

4. Existing course corequisites:
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No Corequisites exist for ECE 4810 in term 201940.

5. Proposed course corequisites:
none

6. Proposed course prerequisites that may be taken concurrently (before or at the same time):
   ECE 4510

7. Minimum grade for prerequisites (default grades are D for Undergrad and C for Grad):
   C

8. Do prerequisites and corequisites for 5000-level courses apply to undergraduates, graduates, or both?
   Not Applicable

9. If this change applies to multiple courses, please list them below.
   Not Applicable

A. Please choose Yes or No to indicate if this class is a Teacher Education class:
   No

B. Please choose the applicable class level:
   Undergraduate

C. Please choose Yes or No to indicate if this class is a General Education class:
   No

D. Explain briefly and clearly the proposed improvement.
   (a) Addition of ECE 3710 to the prerequisite list for senior design (ECE 4810)
   (b) Change ECE 3550 prerequisite to ECE 4525 to reflect course number change

E. Rationale. Give your reason(s) for the proposed improvement. (If your proposal includes prerequisites, justify those, too.).
   (a) To ensure students enrolled in this first course of a two-course sequence representing a capstone design project have adequate understanding of design and synthesis techniques as they apply to linear systems, which are integral components in typical design projects.
   (b) To reflect course number change from ECE 3550 to ECE 4525

F. List the student learning outcomes for the proposed course or the revised or proposed major, minor, or concentration. These are the outcomes that the department will use for future assessments of the course or program.
   Not applicable as the course already exists.

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G. Describe how this curriculum change is a response to student learning assessment outcomes that are part of a departmental or college assessment plan or informal assessment activities.
(a) This change is in response to informal assessment activities including discussions with senior design project supervisors, as well as exit interviews with graduating seniors.

H. Effect on other colleges, departments or programs. If consultation with others is required, attach evidence of consultation and support. If objections have been raised, document the resolution. Demonstrate that the program you propose is not a duplication of an existing one. None anticipated, as the course is taken by department majors only, and is already a required course.

I. Effect on your department’s programs. Show how the proposed change fits with other departmental offerings.
(a) This will help ensure students are adequately prepared for their capstone/senior design experience.

J. Effects on enrolled students: are program conflicts avoided? Will your proposal make it easier or harder for students to meet graduation requirements? Can students complete the program in a reasonable time? Show that you have considered scheduling needs and demands on students’ time. If a required course will be offered during summer only, provide a rationale.
This course (ECE 3710) is already listed in semester 6 in the example program course flow provided in the catalog, which is the semester immediately preceding the anticipated semester (7) for ECE 4810.

K. Student or external market demand. What is your anticipated student audience? What evidence of student or market demand or need exists? What is the estimated enrollment? What other factors make your proposal beneficial to students?
All computer and electrical engineering majors are already required to complete ECE 3710.

L. Effects on resources. Explain how your proposal would affect department and University resources, including faculty, equipment, space, technology, and library holdings. Tell how you will staff additions to the program. If more advising will be needed, how will you provide for it? How often will course(s) be offered? What will be the initial one-time costs and the ongoing base-funding costs for the proposed program? (Attach additional pages, as necessary.)
We do not anticipate additional resources required. The course is offered each fall and each spring semester.

M. With the change from General Education to WMU Essential Studies, this question is no longer used.

For courses requesting approval as a WMU Essential Studies course, a syllabus identifying the student learning outcomes and an action plan for assessing the student learning outcomes must be attached in the Banner Workflow system.
Not Applicable

N. (Undergraduate proposals only) Describe, in detail, how this curriculum change affects transfer articulation for Michigan community colleges. For course changes, include detail on necessary changes to transfer articulation from Michigan community college courses. For new majors or minors, describe transfer guidelines to be developed with Michigan community colleges. For revisions to majors or minors, describe necessary revisions to Michigan community college guidelines. Department chairs should seek assistance from college advising directors or from the admissions office in completing this section. This is not applicable.

O. Current catalog copy:
ECE 4810 - Electrical/Computer Engineering Design I

First of a two-semester sequence on engineering design in which students work in teams on approved design projects. A preliminary design is expected at the conclusion of this course.

Prerequisites & Corequisites: Prerequisites: IEE 3160 and ECE 2510, and either (ECE 3200 or ECE 3300) or (ECE 3550 and ECE 4510); with a grade of “C” or better required in all prerequisites.

Credits: 2 hours

Restrictions: This course is restricted to computer engineering and electrical engineering majors only.

Lecture Hours - Laboratory Hours: (1 - 3)

P. Proposed catalog copy:
ECE 4810 - Electrical/Computer Engineering Design I

First of a two-semester sequence on engineering design in which students work in teams on approved design projects. A preliminary design is expected at the conclusion of this course.

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Credits: 2 hours

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Lecture Hours - Laboratory Hours: (1 - 3)