

REQUEST TO COLLEGE CURRICULUM COMMITTEE FOR CURRICULAR IMPROVEMENTS

DEPARTMENT: IEE&EM PROPOSED EFFECTIVE SEMESTER: Fall, 2017 COLLEGE: CEAS

PROPOSED IMPROVEMENTS

Academic Program

- ☐ New degree*
☐ New major*
☐ New curriculum*
☐ New concentration*
☐ New certificate
☐ New minor
☐ Revised major
☐ Revised minor
☒ Admission requirements
☐ Graduation requirements
☐ Deletion ☐ Transfer
☐ Other (explain**)

Substantive Course Changes

- ☐ New course
☐ Pre or Co-requisites
☐ Deletion (required by others)
☐ Course #, different level
☐ Credit hours
☐ Enrollment restriction
☐ Course-level restriction
☐ Prefix ☐ Title and description
 (attach current & proposed)
☐ General education (select one)
 Not Applicable
☐ Other (explain**)

Misc. Course Changes

- ☐ Title
☐ Description (attach current & proposed)
☐ Deletion (not required by others)
☐ Course #, same level
☐ Variable credit
☐ Credit/no credit
☐ Cross-listing
☐ COGE reapproval
☐ Other (explain**)

**** Other:**

Title of degree, curriculum, major, minor, concentration, or certificate: Master of Science in Engineering Management

Existing course prefix and #: Proposed course prefix and #: Credit hours:

Existing course title:

Proposed course title:

Existing course prerequisite & co-requisite(s):

Proposed course prerequisite(s)

If there are multiple prerequisites, connect with "and" or "or". To remove prerequisites, enter "none."

Proposed course co-requisite(s)

If there are multiple corequisites, they are always joined by "and."

Proposed course prerequisite(s) that can also be taken concurrently:

Is there a minimum grade for the prerequisites or corequisites?

The default grades are D for undergraduates and C for graduates.

Major/minor or classification restrictions:

List the Banner 4 character codes and whether they should be included or excluded.

For 5000 level prerequisites & corequisites: Do these apply to: (circle one) undergraduates graduates both

Specifications for University Schedule of Classes:

a. Course title (maximum of 30 spaces):

b. Multi-topic course: ☐ No ☐ Yes

c. Repeatable for credit: ☐ No ☐ Yes

d. Mandatory credit/no credit: ☐ No ☐ Yes

e. Type of class and contact hours per week (check type and indicate hours as appropriate)

1. ☐ Lecture

3. ☐ Lecture/lab/discussion

5. ☐ Independent study

2. ☐ Lab or discussion

4. ☐ Seminar or ☐ studio

6. ☐ Supervision or practicum

CIP Code (Registrar's use only):

Chair/Director

Shirley B...

Date 2/28/17

Chair, College Curriculum Committee

Date

Dean

Date:

Graduate Dean:

Date

Curriculum Manager: Return to dean ☐ Date

Forward to:

Date

Chair, COGE/ PEB / FS President

Date

FOR PROPOSALS REQUIRING GSC/USC REVIEW:

* ☐ Approve ☐ Disapprove

Chair, GSC/USC

Date

* ☐ Approve ☐ Disapprove

Provost

Date

1. Explain briefly and clearly the proposed improvement.

The purpose is to clarify and modify admission requirements, specifically to specify mathematics course requirements and eliminate chemistry and physics.

2. Rationale. Give your reason(s) for the proposed improvement. (If your proposal includes prerequisites, justify those, too.)

The need for calculus and statistics is tied to faculty expectations of students to perform well in the program. Admission requirements need to specify those courses. The program is open to engineering, technology, and related programs. Not all students have chemistry and physics and the skill sets offered by those classes are not expected or needed in the graduate program.

3. 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.

No effect

4. Effect on your department's programs. Show how the proposed change fits with other departmental offerings.

Improves student's ability to start the program by reducing the number of prerequisites for the program.

5. 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.

No effect

6. 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?

Students without chemistry and physics is a very small percentage, less than 5%. By eliminating the requirement, students without chemistry and physics may enroll in the program.

7. 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.)

No effect

8. General education criteria. For a general education course, indicate how this course will meet the criteria for the area or proficiency. (See the General Education Policy for descriptions of each area and proficiency and the criteria. Attach additional pages as necessary. Attach a syllabus if (a) proposing a new course, (b) requesting certification for baccalaureate-level writing, or (c) requesting reapproval of an existing course.)

N/A - Masters level

9. List the 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.

The learning objectives of the Engineering Management program are listed below. The elimination of chemistry and physics from the program prerequisites will not have an effect on the outcomes as that skill set is not included in the learning objectives.

1. To enhance the capabilities to deal with resources available in commerce and industry to managing people, money, and projects.
2. To develop the leadership capabilities based on the student's strong technical background and significant managerial skills.

3. To allow students to develop analytical and managerial skills and to acquire knowledge in related fields.
 4. To develop their ability to integrate technical, managerial and systems skills to improve the performance of the enterprise.
 5. To prepare students for further study in post-master's and doctoral programs as their interest and professional growth require.
10. Describe how this curriculum change is a response to assessment outcomes that are part of a departmental or college assessment plan or informal assessment activities.

N/A

11. (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.

N/A

Specifics of change

Current admission requirements (2016-17 Graduate Catalog)

Admission Requirements

1. Possess a baccalaureate degree with a major in a technical field, such as engineering, technology, mathematics, computer science, or the physical sciences. For other majors, see item 2.
2. Show evidence of completion of at least eight semester hours of mathematics and eight semester hours of physics and/or chemistry with a minimum overall grade point average of 2.5 in these areas.
3. Submit GRE (Graduate Record Examination) scores for the General Test.
4. Undergraduate courses should have been completed in calculus, statistics, computer programming, work methods analysis, operations planning and control, and quality control. Where the student's background is deficient, foundation courses will be required. Students may take IEE 5010 to acquire an understanding of work methods analysis, operations planning and control, and quality control.

New admission requirements

1. Possess a baccalaureate degree with a major in a technical field, such as engineering, technology, mathematics, computer science, or the physical sciences. For other majors, see item 2.
2. Show evidence of completion of at least eight semester hours of mathematics with a minimum overall grade point average of 2.5 in those courses.
3. Submit GRE (Graduate Record Examination) scores for the General Test.
4. Undergraduate courses should have been completed in calculus, statistics, computer programming, work methods analysis, operations planning and control, and quality control. Where the student's background is deficient, foundation courses will be required. Students may take IEE 5010 to acquire an understanding of work methods analysis, operations planning and control, and quality control.