

## REQUEST TO COLLEGE CURRICULUM COMMITTEE FOR CURRICULAR IMPROVEMENTS

DEPARTMENT: MAE PROPOSED EFFECTIVE SEMESTER: Fall 2018 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: Program pre-requisite changes: change the GPA required to be admitted to mechanical engineering

Title of degree, curriculum, major, minor, concentration, or certificate: BS in Mechanical engineering

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

Existing course title: N/A

Proposed course title: N/A

Existing course prerequisite &amp; co-requisite(s): N/A

Proposed course prerequisite(s) N/A

Proposed course co-requisite(s) N/A

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

Is there a minimum grade for the prerequisites or corequisites? N/A

Major/minor or classification restrictions: For 5000 level prerequisites &amp; 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 ☐ Yesc. Repeatable for credit: ☐ No ☐ Yesd. Mandatory credit/no credit: ☐ No ☐ Yes

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

1. ☐ Lecture3. ☐ Lecture/lab/discussion5. ☐ Independent study2. ☐ Lab or discussion4. ☐ Seminar or ☐ studio6. ☐ Supervision or practicum

CIP Code (Registrar's use only):

Chair/Director

*K. Naghsht*

Date 2/7/17

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.

To be admitted to the professional mechanical engineering program (MEGJ), a student must complete all pre-engineering requirements with a GPA of 2.5 or better.

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

The proposed change will ensure that students in the engineering curriculum have mastered pre-engineering material, so classes in the professional program can focus on the appropriate topics of their own nature, rather than substantial review of pre-requisite material.

This change will bring the mechanical engineering program in line with requirements at peer institutions. For example, Michigan State University requires a pre-engineering GPA of 3.1 and Grand Valley State University requires a pre-engineering GPA of 2.7 for admission to the professional mechanical engineering program. Oklahoma State University (a WMU peer institution with BSME and BSAE programs in the same department), requires a GPA of 3.0 for admission to the professional mechanical engineering 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.

Some students who do not meet the 2.5 GPA requirement may consider to declare majors in other departments and colleges at Western.

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

No anticipated effect on programs. The same GPA requirement change is proposed concurrently in the aerospace engineering 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.

None. The proposed GPA requirement will apply to students who enter the professional engineering program in Fall 2018 or later.

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 will benefit from courses in the professional engineering program that focus on major-specific material without the need to repeatedly review pre-engineering material.

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.)

None

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.) No change

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. No change

1. Explain briefly and clearly the proposed improvement.

To be admitted to the professional mechanical engineering program (MEGJ), a student must complete all pre-engineering requirements with a GPA of 2.5 or better.

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. [This proposal is a result of informal assessment and input from instructors who teach professional engineering courses in the mechanical engineering program.](#)
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. [No change](#)

**The current catalog states:**

Admission

1. To be admitted to this engineering curriculum, a student must complete all pre-engineering requirements with grades of "C" or better. These requirements may be found in the beginning of the College of Engineering and Applied Sciences section.
2. Students seeking admission to this curriculum must submit an application following procedures established by the College of Engineering and Applied Sciences. Upper level transfer students may complete an application prior to their first semester of enrollment. Only students in good academic standing as defined by the University will be admitted to this curriculum.

**The proposed catalog language is:**

Admission

1. To be admitted to this engineering curriculum, a student must complete all pre-engineering requirements with grades of "C" or better [and must have a grade point average of 2.5 or better in all pre-engineering requirements](#). These requirements may be found in the beginning of the College of Engineering and Applied Sciences section.
2. Students seeking admission to this curriculum must submit an application following procedures established by the College of Engineering and Applied Sciences. Upper level transfer students may complete an application prior to their first semester of enrollment. Only students in good academic standing as defined by the University will be admitted to this curriculum.