

REQUEST TO COLLEGE CURRICULUM COMMITTEE FOR CURRICULAR IMPROVEMENTS

DEPARTMENT: MAE PROPOSED EFFECTIVE SEMESTER: Spring 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**)

** Other: e

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

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**)

Title of degree, curriculum, major, minor, concentration, or certificate: **Mechanical Engineering**Existing course prefix and #: ME Proposed course prefix and #: **ME 4570** Credit hours:Existing course title: **ME 4570 - Experimental Solid Mechanics**

Proposed course title:

Existing course prerequisite & co-requisite(s): **Prerequisites: (ME 2500 or AE 2500), ME 2570, ME 3350; with a grade of "C" or better in all prerequisites.**

Proposed course prerequisite(s)

Prerequisites: ME3350 and (ME 3650 or AE4630) with a grade of "C" or better in all prerequisites.

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

Proposed course co-requisite(s)

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

Is there a minimum grade for the prerequisites or corequisites?

Major/minor or classification restrictions:

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 ☐ 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. Naghsheh

Date

2/22/17

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 prerequisites for this course are now ME3350 and (ME 3650 or AE4630)

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

The existing prerequisite AE2500 has been removed from the catalog. AE Students are also not required to take ME2500; thus it is very difficult to use ME4570 as an elective.

The updated prerequisites ME3350 and (ME 3650 or AE4630) ensure appropriate preparation and provide acceptable sequencing for this course.

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.

Alteration of the prerequisite makes ME4570 a viable elective course for the AE program and thus provides students more choices in their field of study.

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. Students, faculty, and advisors will need to be aware of the change. Students currently in the course sequence will be able to complete their sequence.

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?

Improved accessibility to electives will improve the external perception of this program. Currently, ME4570 is listed as an elective but requires a difficult path. This is not well liked by students.

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.)

This course is not a general education course

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 outcomes do not change

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 the result of informal assessment initiated by the undergraduate adviser

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 effect

The current catalog description is:

ME 4570 - Experimental Solid Mechanics

Principles and methods of mechanical testing, stress and strain analysis under monotonic and cyclic loading, fatigue behavior and fracture involving life prediction and prevention of failure. Experimentation and theory verification, including planning, testing, and data analysis with report preparation.

Prerequisites & Corequisites: Prerequisites: (ME 2500 or AE 2500), ME 2570, ME 3350; with a grade of "C" or better in all prerequisites.

Credits: 3 hours

Restrictions: Restricted to majors in aerospace engineering, aeronautical engineering or mechanical engineering.

Lecture Hours - Laboratory Hours: (2 – 3)

When Offered: Fall, Spring

The proposed catalog description is:

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Principles and methods of mechanical testing, stress and strain analysis under monotonic and cyclic loading, fatigue behavior and fracture involving life prediction and prevention of failure. Experimentation and theory verification, including planning, testing, and data analysis with report preparation.

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