

## REQUEST TO COLLEGE CURRICULUM COMMITTEE FOR CURRICULAR IMPROVEMENTS

DEPARTMENT: MAE PROPOSED EFFECTIVE SEMESTER: Fall 2015 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:

## 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: Aerospace Engineering

Existing course prefix and #: AE4700 Proposed course prefix and #: Credit hours:

Existing course title: AE4700 Orbital Mechanics

Proposed course title:

Existing course prerequisite &amp; 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:

This course restricted to majors in aerospace engineering. (AEGJ)

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

Date 10/17/2014

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.

Correct the catalog description. The course is available in aerospace engineering (not aeronautical engineering).

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

The program is now called aerospace engineering.

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.

Not applicable

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

Not applicable

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.

Not applicable

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?

Not applicable

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.)

Not applicable

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.)

Not applicable

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.

Not applicable

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.

Not applicable

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.

Not applicable

**The current catalog description is:**

**AE 4700 - Orbital Mechanics**

Introduction to astrodynamics, including the two-body problem and restricted three-body problem, orbital trajectories, transfers and targeting, and orbit determination. Computer modeling and simulation of orbital trajectories.

Prerequisites & Corequisites: Prerequisite: ME 2580, with a grade of "C" or better.

Credits: 3 hours

Restrictions: This course restricted to majors in aerospace engineering, aeronautical engineering or mechanical engineering.

When Offered: Fall

**The proposed catalog description is:**

**AE 4700 - Orbital Mechanics**

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