CEAS-14-015-EDMM

REQUEST TO COLLEGE CURRICULUM COMMITTEE FOR CURRICULAR IMPROVEMENTS

DEPARTMENT: EDMMS **PROPOSED EFFECTIVE SEMESTER:** Spring 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**)

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: Remove the listed prerequisites for EDMM 4570 and change them to "Recommended"**

Title of degree, curriculum, major, minor, concentration, or certificate:

Existing course prefix and #: EDMM 4570 **Proposed course prefix and #:** **Credit hours:**

Existing course title: Manufacturing for Sustainability

Proposed course title:

Existing course prerequisite & co-requisite(s): IME 2500 and IME 3200 and IME 3520
Proposed course prerequisite(s)): None. "Recommended: IME 2500 or IME 3520, and IME 3200"
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? "C"
The default grades are D for undergraduates and C for graduates.
Major/minor or classification restrictions: No Change
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
2. ☐ Lab or discussion
3. ☐ Lecture/lab/discussion
4. ☐ Seminar or ☐ studio
5. ☐ Independent study
6. ☐ Supervision or practicum

CIP Code (Registrar's use only):

Chair/Director Stu E. Bart Date 10/6/14

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

Revised May 2007. All previous forms are obsolete and should not be used.

1. Explain briefly and clearly the proposed improvement.
   We propose to remove the three current prerequisites for IME 4570 on the basis that they are not genuinely needed and that they have posed an obstruction to students registering for the course in a timely manner or being allowed to take the course at all.

2. Rationale. Give your reason(s) for the proposed improvement. (If your proposal includes prerequisites, justify those, too.)
   When the course was created in 2011, it was thought that some other courses in the program (two of the three prerequisites, Plastics and Metal Casting) dealt substantially with sustainability, and that IME 4570 would be able to build on those earlier materials. This has not been the case. Any information on plastics and metal casting necessary for the course is included in the IME 4570 course materials. Engineering Economy is also not needed for the course. Any of the three courses in question would be helpful but are not necessary to successful comprehension or completion of the course.

   Nearly all students who have taken IME 4570 since it began in Spring 2011 have had one to all of the prerequisites waived. Moreover, students from outside the Manufacturing Engineering Technology program have expressed a wish to take the course (and some have done so), but had difficulty registering due to lack of the prerequisites. In nearly all cases, students had to seek advising help to get the waivers necessary.

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.
   Students outside of the Manufacturing Engineering Technology program will now likely take the course. There is no other course like it in the EDMMS department or in the CEAS.

4. Effect on your department's programs. Show how the proposed change fits with other departmental offerings.
   This change will open enrollment in a course whose subject (sustainability) is increasingly of interest to students in the EDMMS department's other two programs, and across the CEAS.

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.
   The result for students is that they will now be able to register for IME 4570 in a more timely manner, without having to complete prerequisites or having to make a special advising appointment.

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?
   The student demand over the last three years has proven to be around 16 students per year. Students have been turned away because they have not met the current prerequisites; some have had to delay taking the course until the very end of their senior year, which detracts from the course's usefulness in helping with capstone senior projects.

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 as stated above.

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 has no effect on General Education classes.

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. **At this point, the intent is to deliver the program as it was accredited in the last TAC/ABET cycle.**

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 change is not a response to recent outcomes assessments. However, the need for sustainability practices in industry are increasingly voiced by engineering professionals and by ABET representatives.

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.
This has no effect on existing articulation agreements.

OLD Catalog Copy

EDMM 4570 - Manufacturing for Sustainability

Examines how manufacturing enterprises can develop cost-effective strategies for products and processes that address current and future needs for sustainability. The course focuses on manufacturing processes, systems, and tool/machinery, including energy, materials, and supply chain and distribution factors as they impact manufacturing.

Prerequisites & Corequisites: Prerequisites: EDMM 2500, EDMM 3200 and EDMM 3520.

Credits: 2 hours

Lecture Hours - Laboratory Hours: (2 - 0)

NEW Catalog Copy

EDMM 4570 - Manufacturing for Sustainability

Examines how manufacturing enterprises can develop cost-effective strategies for products and processes that address current and future needs for sustainability. The course focuses on manufacturing processes, systems, and tool/machinery, including energy, materials, and supply chain and distribution factors as they impact manufacturing.

Prerequisites & Corequisites: none.

Notes: EDMM 2500, EDMM 3200 and EDMM 3520 recommended.

Credits: 2 hours

Lecture Hours - Laboratory Hours: (2 - 0)