REQUEST TO COLLEGE CURRICULUM COMMITTEE FOR CURRICULAR IMPROVEMENTS

DEPARTMENT: EDMM  PROPOSED EFFECTIVE SEMESTER: Fall 2016  COLLEGE: CEAS

PROPOSED IMPROVEMENTS

☐ New degree*  ☐ Substantive Course Changes
☐ New major*  ☐ New course
☐ New curriculum*  ☐ Pre or Co-requisites
☐ New concentration*  ☐ Deletion (required by others)
☒ New certificate  ☐ Course #, different level
☐ New minor  ☐ Credit hours
☐ Revised major  ☐ Enrollment restriction
☐ Revised minor  ☐ Course-level restriction
☐ Admission requirements  ☐ Prefix ☐ Title and description (attach current & proposed)
☐ Graduation requirements  ☐ General education (select one)
☐ Deletion ☐ Transfer  ☐ Not Applicable
☐ Other (explain**)  ☐ Other (explain**)

** Other:

Title of degree, curriculum, major, minor, concentration, or certificate: Advanced Design and Manufacturing

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:

Chair, College Curriculum Committee:

Dean:

Curriculum Manager: Return to dean ☐ Date Forward to:

Chair, COGE/PEB/FS President:

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.

The proposed 16 credit-hour certificate program in Advanced Design and Manufacturing (ADM) provides both a new credential and a pathway into WMU.

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

This gives the opportunity for WMU to attract new students through the Advanced Manufacturing Partnership (AMP) in Grand Rapids (GR) as well as current high school students participating in various early/middle college programs. The initial target populations are located in Grand Rapids with expansion possible in Muskegon, Montcalm, and Van Buren counties.

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.

None

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

The certificate will provide a pipeline of additional GR and Grand Rapids Community College (GRCC) transfer students with a set of classes that transfer directly into the WMU BS degrees in Engineering Design Technology, Manufacturing Engineering Technology and Engineering Management Technology.

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.

All classes will be held at the AMP lab located in the Downtown GR WMU facility or at GRCC. The certificate should make it easier for recipients to obtain a BS degree from WMU. Students will be able to complete the ADM certificate in two semesters while taking other classes for high school or their Associates degree.

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?

It is expected that between 15 and 50 students will enter the certificate program in any given year. This probable demand has been expressed by three separate groups including the companies participating in AMP and well as the GR Public Schools and the GR Catholic Diocese.

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.)

Extended University Programs (EUP) is supporting the faculty resources for this certificate program.

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.)

The only class that is part of General Education is EDMM 1500 (Area 7). This class and will not change its structure or content.
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.

1. Correctly visualize three-dimensional geometry from two-dimensional graphical representations.
2. Use computer-aided design (CAD) to produce graphical representations of objects as part of the design process.
3. Apply the industrial design thought process and methodology to the development and creation of products.
4. Evaluate the impact of both process and materials selection decisions on productivity, quality and sustainability.
5. Understand the importance of design and manufacturing of products within our global society.

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.

The needs assessment per se has been done by the companies involved in AMP and well as the GR Public Schools and the GR Catholic Diocese. In each case members of the EDMMS Department have been approached by the aforementioned groups to provide this avenue for knowledge improvement and credentialing of their employees/students.

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 proposal has been made following articulation consultations with GRCC in particular. Some of the course in the proposed certificate program have transferability from Kalamazoo Valley Community College (EDMM 1420, 1500, & 2540) and from Muskegon Community College (EDMM 1420, 1500, 2460 & 2540). This is due to many years of close cooperation in articulation.