REQUEST TO COLLEGE CURRICULUM COMMITTEE FOR CURRICULAR IMPROVEMENTS

DEPARTMENT: *Engineering Design, Manufacturing and Management Systems* (EDMMS)
PROPOSED EFFECTIVE SEMESTER: *Spring 2018* **COLLEGE:** *Engineering and Applied Sciences*
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
- [x] 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:**
Title of degree, curriculum, major, minor, concentration, or certificate:

Existing course prefix and #: *EDMM4480*   **Proposed course prefix and #:**   **Credit hours:** *3*

Existing course title: *Computer Aided Analysis*
Proposed course title:
Existing course prerequisite & co-requisite(s): *EDMM 3440: Product and Machine Design, and EDMM 3480 with concurrency*
Proposed course prerequisite(s):
   If there are multiple prerequisites, connect with "and" or "or". To remove prerequisites, enter "none."
   EDMM 3440: Product and Machine Design and
   EDMM 4460: Advanced Computer-Aided Design
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:
   EDMM 3480 with concurrency
Is there a minimum grade for the prerequisites or corequisites? *No*
   The default grades are D for undergraduates and C for graduates.
Major/minor or classification restrictions: *None*
   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): *Computer Aided Analysis*
b. Multi-topic course: [x] No   [ ] Yes
c. Repeatable for credit: [x] No   [ ] Yes
d. Mandatory credit/no credit: [x] No   [ ] Yes
e. Type of class and contact hours per week (check type and indicate hours as appropriate)
   1. [ ] Lecture   3. [x] 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 _(signature)_		Date 3/9/17
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

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

1. Explain briefly and clearly the proposed improvement.

   This new pre-requisite will make sure that students follow the sequence of courses listed for the Engineering Design Technology (EDT) program.

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

   Topics covered in the new pre-requisite (EDMM4460) are utilized in the senior-level course (EDMM4480). The pre-requisite is listed as a third-year course in the Engineering Design Technology program.
   Feedback received by the students in previous years indicate that, in case they need to take more credits for a given semester, they tend to take the senior level course without completing all of the junior courses in their major. After taking the senior level course, and then the junior level course, the students realize that the EDMM4460 material would have been helpful in EDMM4480.

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. Course will only be required for students in the Engineering Design Technology (EDT) program.

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

   None. Course will only be required for students in the Engineering Design Technology (EDT) 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 changes will take effect for the Spring 2018 semester.

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?

   Student demand is expected to be similar to existing junior and senior-level courses in the program (i.e., average of 20 students per lab section, with one lab section per offering).

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. It is only a change in pre-requisite.

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.

Decision based on input from students, recent alumni, and observation by faculty member teaching both courses.

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.

The proposed change has no effect on any existing transfer articulations.

Old Catalog copy:

EDMM 4480 - Computer-Aided Analysis

Understanding and application of Computer-Aided Design (CAD) principles for design analysis of conceptual designs. Exposure to and utilization of commercial software packages for computer-based design analysis techniques (e.g., Finite Element Analysis - FEA) and customized design evaluation (e.g., symbolic evaluation). Interaction with, and among, selected drafting/modeling and design/analysis packages.

Prerequisites & Corequisites: Prerequisites: EDMM 3440 and EDMM 3480 (EDMM 3480 may be taken concurrently).

Credits: 3 hours

Lecture Hours - Laboratory Hours: (2 - 3)

New Catalog copy:

EDMM 4480 - Computer-Aided Analysis

Understanding and application of Computer-Aided Design (CAD) principles for design analysis of conceptual designs. Exposure to and utilization of commercial software packages for computer-based design analysis techniques (e.g., Finite Element Analysis - FEA) and customized design evaluation (e.g., symbolic evaluation). Interaction with, and among, selected drafting/modeling and design/analysis packages.

Prerequisites & Corequisites: Prerequisites: EDMM 4460 and EDMM 3440 and EDMM 3480 (EDMM 3480 may be taken concurrently).

Credits: 3 hours

Lecture Hours - Laboratory Hours: (2 - 3)