CEAS-14-848-CHP

REQUEST TO COLLEGE CURRICULUM COMMITTEE FOR CURRICULAR IMPROVEMENTS

DEPARTMENT: Chemical and Paper Engineering **PROPOSED EFFECTIVE SEMESTER:** Fall 2015
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
- ☐ 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:** Include ME 5600 as an approved mathematics course for the degree program.

Title of degree, curriculum, major, minor, concentration, or certificate: MS in Engineering (Chemical)

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 3-0
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 [signature] Date 10/10/14

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.

   Include "ME 5600 – Engineering Analysis" as an approved mathematics course for the MS in Engineering (Chemical) degree program.

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

   Allows students an additional course that they can use to fulfill the mathematics "Core Course" requirement for their MS degree program.

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.

   Please see attached e-mail permission from the MAE department for listing ME 5600 as part of the MS in Engineering (Chemical) degree program. It is expected that only five students per year may enroll in one of the three ME courses that will be available for students to potentially fulfill the mathematics requirement for the MS in Engineering (Chemical) degree program.

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

   Allows flexibility for students scheduling if "CHEG 6000 - Chemical Engineering Mathematics" is not offered consistently.

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 proposed change will provide greater flexibility to students for scheduling a course to fulfill the mathematics requirement for the MS in Engineering (Chemical) degree program.

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?

   Estimated enrollment is that up to five students per academic year may enroll in one of three ME courses that will be available to fulfill the math requirement for the MS in Engineering (Chemical) degree program.

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 negative impact. This proposed change may increase enrollment in ME courses that have not been at capacity when they are offered.

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 a result of assessment activities. This proposed addition is put forward to increase student scheduling flexibility.

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.

Please see attached Catalog Copy excerpt that has been updated for this proposed change.

Please see attached e-mail from the MAE department agreeing to this proposed change.

New Catalog Copy for Adding ME 5600 to the MS in Engineering (Chemical) degree program

Core Courses

All Chemical Engineering graduate students must complete the Core courses:

- CHEG 6100 - Chemical Engineering Thermodynamics **Credits:** 3 hours
- CHEG 6200 - Advanced Transport Processes **Credits:** 3 hours
- CHEG 6300 - Chemical Reaction Engineering **Credits:** 3 hours

In addition

To fulfill the mathematics requirement for the Core courses, students must select one of the following:

- CHEG 6000 - Chemical Engineering Mathematics **Credits:** 3 hours
- ME 5600 – Engineering Analysis **Credits:** 3 hours
- ME 5610 - Finite Element Method **Credits:** 3 hours
- ME 5620 - Application of Numerical Methods in Engineering **Credits:** 3 hours

Note:

Students, with permission of the departmental graduate committee, may replace one of the Core courses with an additional course from the list of Electives.

----- Original Message -----
> From: "Parviz Merati" <parviz.merati@wmich.edu>
> To: "Koorosh Naghshineh" <koorosh.naghshineh@wmich.edu>
> Cc: "Andrew A Kline" <andrew.kline@wmich.edu>, "cho" <christopher.cho@wmich.edu>
> Sent: Friday, October 3, 2014 7:46:44 AM
> Subject: Re: permission for use of an ME class in MS CHEG program ?
>
> No problem from my side as well.
>
> Sent from my iPhone
>
> > On Oct 2, 2014, at 8:55 PM, Koorosh Naghshineh
> > <koorosh.naghshineh@wmich.edu> wrote:
> >
> > Andy,
> >
> > I think this would be wonderful for our department. Yes, by all
> > means go
> > ahead and include our Math courses in your curriculum (ME6370 too).
> >
> > Just to be on the safe side, I am copying Dr. Merati to see if he
> > feels
> > the need for us to consult anyone else within the department. I am
> > also
> > copying Dr. Cho who is the MAE representative on the CCC so he
> > knows I
> > support this.
> >
> > Take care,
> > Koorosh
> > _____
> > Koorosh Naghshineh, Ph.D., P.E.
> > Department Graduate Adviser
> > Professor and Director
> > Noise and Vibration Laboratory
> > Mechanical and Aerospace Engineering Department
> > Western Michigan University
> > 1903 West Michigan Avenue
> > Kalamazoo, MI 49008-5343
> > Office Phone: (269)276-3431
> > Fax: (269)276-3421
> > Email: koorosh.naghshineh@wmich.edu
> > http://homepages.wmich.edu/~naghshin
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> > -----Original Message-----
> > From: Andrew A Kline <andrew.kline@wmich.edu>
> > Date: Thursday, October 2, 2014 at 7:42 PM
> > To: Koorosh Naghshineh <koorosh.naghshineh@wmich.edu>
> > Cc: andrew kline <andrew.kline@wmich.edu>
> > Subject: permission for use of an ME class in MS CHEG program ?
> >
> >>
> >>
> >>
> >> Hi Koorosh -
> >>

> >> We currently include ME 5610 and 5620 as possible electives in our
> >> MS in
> >> Engineering (Chemical) degree program to fulfill our math
> >> requirement.
> >> We would like to officially expand this list to include ME 5600.
> >> Based
> >> on our current enrolments, we would expect at most to have 5
> >> students per
> >> academic year enrolled in one or more of the courses, depending on
> >> which
> >> is offered.
> >>
> >> If you can give permission for us to do this for our curriculum
> >> change
> >> forms, please let me know. If this needs to be reviewed elsewhere
> >> in the
> >> MAE department, please forward this to the correct person for
> >> review and
> >> decision.
> >>
> >>
> >> many thanks
> >>
> >> Andy Kline
> >> Graduate Advisor
> >> Chemical and Paper Engineering