

## REQUEST TO COLLEGE CURRICULUM COMMITTEE FOR CURRICULAR IMPROVEMENTS

DEPARTMENT: CHP 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\*\*)

## 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: Number of repeats limited to 1. (2 replications)

Title of degree, curriculum, major, minor, concentration, or certificate: B.S. in Chemical Engineering, and B.S. in Paper Engineering

Existing course prefix and #: CHEG 4440 Proposed course prefix and #: CHEG 4440 Credit hours: No Change.

Existing course title: Energy Management Engineering

Proposed course title: Energy Management Engineering

Existing course prerequisite &amp; co-requisite(s): (CHEG 3120 and 3200) or (ME 4310 and 4320).

Proposed course prerequisite(s): (CHEG 3120 and 3200) or (ME 4310 and 4320) or {CHEG 3120 and CHEM 4300 (Can be taken concurrently)}

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 in CHEG 3120 and 3300

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 &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. ☐ 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

Date

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.

Change in prerequisites for CHEG 4440 from (CHEG 3120 and 3200) or (ME 4310 and 4320) to (CHEG 3120 and 3200) or (ME 4310 and 4320) or {CHEG 3120 and CHEM 4300 (Can be taken concurrently)}.

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

Paper Engineering majors don't have to take CHEG 3200. Hence CHEM 4300 as a concurrent prerequisite in lieu of CHEG 3300 (as a prerequisite) is added to help the Paper Engineering majors (with emphasis in Environmental Engineering and Sustainable Processes) in fulfilling the prerequisites for this course. The relevant prerequisite topics are covered both in CHEG 3200 and CHEM 4300..

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.

No change as no new/additional courses are involved. .

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

No effect.

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.

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?

No change foreseen.

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 effect.

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. No Change

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 is an off shoot of the last curriculum revision.

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.

## Catalog Copy

Current:

### **CHEG 4440 - Energy Management Engineering**

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Energy systems including combustion processes and steam generation and distribution. Practical issues and equipment used in the energy industry. Energy efficiency, economic operation, and reduction of emissions.

**Prerequisites & Corequisites:** Prerequisites: (CHEG 3120 and 3200) or (ME 4310 and 4320).

**Credits:** 3 hours

**Lecture Hours - Laboratory Hours:** (3 - 0)

Proposed:

### **CHEG 4440 - Energy Management Engineering**

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Energy systems including combustion processes and steam generation and distribution. Practical issues and equipment used in the energy industry. Energy efficiency, economic operation, and reduction of emissions.

**Prerequisites & Corequisites:** Prerequisites: (CHEG 3120 and 3200) or (ME 4310 and 4320) or {CHEG 3120 and CHEM 4300 (Can be taken concurrently)}

**Credits: 3 hours**

**Lecture Hours - Laboratory Hours: (3 - 0)**