CEAS-14-CHP-055R

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 2960 **Proposed course prefix and #:** CHEG 2960 **Credit hours:** No Change.
Existing course title: Material and Energy Balance
Proposed course title: Material and Energy Balance
Existing course prerequisite & co-requisite(s): CHEG 1810 (may be taken concurrently), CHEM 1100 and PHYS 2050.

Proposed course prerequisite(s) PHYS 2050 (may be taken concurrently), MATH 1230, CHEM 1100, and CHEG 1810

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 1810
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 _____ Date 3/10/2015

Chair, College Curriculum Committee _____ Date 3/25/2015

Dean _____ Date: Graduate Dean: _____ Date 3-26-15

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.

   Change in prerequisites for CHEG 2960 from CHEG 1810 (may be taken concurrently), CHEM 1100 and PHYS 2050 to PHYS 2050 (may be taken concurrently), CHEG 1810, CHEM 1100, and MATH 1230.

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

   MATH 1230 was an embedded prerequisite as it was a co-requisite for PHYS 2050. However, in practice, students were able to pass PHYS 2050 without passing MATH 1230. It is felt that the MATH skills are comparatively more appropriate for CHEG 2960. However, to reduce the burden on the student in an orderly progress to the degree, PHYS 2050 is made a co-requisite. In a similar vein, CHEG 1810 is found to be more important on the basis of faculty reports and hence is made as a prerequisite (not to be taken concurrently).

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.

   Will make the course delivery in subsequent courses more efficient and slightly more challenging.

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.

   Students will be better prepared for all subsequent courses.

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.)

   Better deployment of resources.

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 a result of faculty observations.
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 2960 - Material and Energy Balance

Fundamentals of chemical engineering dealing with behavior of gases, thermophysical properties of solids, liquids and gases, thermochemistry and associated problem solving. Emphasis is on material and energy balances. The laboratory session will be used as a problem solving workshop.

Prerequisites & Corequisites: Prerequisites: CHEG 1810 (may be taken concurrently), CHEM 1100 and PHYS 2050.

Credits: 4 hours

Notes: Will be offered as honors courses for interested students
Lecture Hours - Laboratory Hours: (3 - 3)

Proposed:

CHEG 2960 - Material and Energy Balance

Fundamentals of chemical engineering dealing with behavior of gases, thermophysical properties of solids, liquids and gases, thermochemistry and associated problem solving. Emphasis is on material and energy balances. The laboratory session will be used as a problem solving workshop.

Prerequisites & Corequisites: Prerequisites: PHYS 2050 (may be taken concurrently), MATH 1230, CHEM 1100, and CHEG 1810
Credits: 4 hours

Notes: Will be offered as honors courses for interested students
Lecture Hours - Laboratory Hours: (3 - 3)