CEAS-14-ChP-007

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
- X☐ 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: Chemical Engineering

Existing course prefix and #: CHEG 4870 **Proposed course prefix and #:** CHEG 4870 **Credit hours:** 3

Existing course title: Senior Design Project

Proposed course title: **Senior Design Project**

Existing course prerequisite & co-requisite(s): Prerequisites: CHEG 4600
Proposed course prerequisite(s) Same: Prerequisites: CHEG 4600
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 X☐Yes
c. Repeatable for credit: ☐ No **X**☐ 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. X☐ 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 Said AbuBakr Said AbuBakr Date 9/25/2014

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.

   Add to the catalog course description: The project is the culmination of the curriculum and is a major design experience based on the knowledge and kills acquired in earlier coursework and incorporate appropriate engineering standards and multiple realistic constraints

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

   To satisfy ABET accreditation criteria

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 effect

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.

   No effects

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?

   Same as before

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 effects

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.)

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. Same

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. ABET assessment and evaluation

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. No effects

CHEG 4870 - Senior Design Project

Application of chemical engineering to the solution of a complex, open-ended research problem selected in consultation with faculty. The project will involve feasibility analysis, design, and optimization of chemical processes. **The project is the culmination of the curriculum and is a major design experience based on the knowledge and skills acquired in earlier coursework and will incorporate appropriate engineering standards and multiple realistic constraints.** Emphasis will be on working in small design groups, submission of written report, and oral presentation. This course is approved as a writing-intensive course which may fulfill the baccalaureate-level writing requirement of the student's curriculum.

Prerequisites & Corequisites: Prerequisite: CHEG 4600.

Credits: 3 hours

Notes: Will be offered as honors courses for interested students

Lecture Hours - Laboratory Hours: (1 - 2)

old

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