CEAS-14 - CHP - 050

REQUEST TO COLLEGE CURRICULUM COMMITTEE FOR CURRICULAR IMPROVEMENTS

DEPARTMENT: Chemical and Paper Engineering **PROPOSED EFFECTIVE SEMESTER:** Fall 2016
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:**

Title of degree, curriculum, major, minor, concentration, or certificate: Chemical Engineering

Existing course prefix and #: **Proposed course prefix and #:** CHEG 7100 **Credit hours:** 2 - 6 hrs

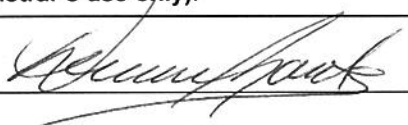
Existing course title:

Proposed course title: Independent Research

Existing course prerequisite & co-requisite(s):
Proposed course prerequisite(s) Approved application and department approval.
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): Independent Research
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 3 hours per week
6. ☐ Supervision or practicum

CIP Code (Registrar's use only):

Chair/Director  Date 3/9/2015

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.

   Independent Research credit hours with the CHEG course prefix.

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

   Students enrolled in the MS in Engineering (Chemical) degree program, or the PhD in Engineering and Applied Sciences, Engineering track, will be able to have Independent Research credit hours on their transcripts with the CHEG course prefix which would best reflect the content of their Independent Research.

   Prerequisites will be a completed Permission to Elect form, approved by the department.

   MS degree program students will be limited to a maximum of electing 3 credit hours of CHEG 7100 as part of their approved degree program. The faculty feel that additional credit hours beyond a maximum of three limits the number of other academic courses students enroll in to fulfill their MS degree requirements, reducing the breadth of the topics they study as MS students.

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 outside the department.

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

   The proposed change allows students to elect Independent Research credit hours with a course prefix that best reflects the content of their work.

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 desiring to take Independent Research have been enrolling in PAPR 7100. Using the CHEG course prefix will not conflict with any programs, or lengthen a student's time to degree.

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?

   Requests from currently enrolled students to have the CHEG course prefix to better show their area or topic of research on their transcripts.

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 additional resources. Students currently electing PAPR 7100 credit hours would instead enroll in CHEG 7100, if it best fits their degree program.

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.

   1. An advanced ability to use the techniques, skills, and modern engineering tools necessary to design a system, component, or process to meet the desired needs.

   2. An advanced ability to identify, formulate, and solve engineering problems.

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.

    Response to student requests.

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

CHEG 7100 - Independent Research

Designed for highly qualified advanced graduate students, or small groups, who wish to pursue individual studies or projects under the direction of a member of the Graduate Faculty. The faculty member shall be the instructor of record who is responsible for turning in a grade to the Registrar's Office. A Permission to Elect form, signed by the student's graduate advisor and the faculty supervisor, must be submitted to the Records Office prior to registration.

Prerequisites/Corequisites: Prerequisite: Approved application and department approval.

Credits: 2-6 hrs.

Notes: Open to Graduate Students Only. Graded on a Credit/No Credit basis. MS degree program students may elect a maximum of 3 credit hours as part of their final degree program.