CM 4861 Design Substitution

Verification of Senior Design Objectives through an Alternative Design Experience

Requirements for the CM 4861 Design Substitution:
1. You must be senior-design-ready when you take the course. To be senior-design-ready you must have successfully completed the following courses:
   - CM 3120 Transport/Unit Operations II
   - CM 3230 Thermodynamics for Chemical Engineers
   - CM 3410 Tech Comm for Chem Eng
   - CM 3510 Chemical Reaction Engineering
2. Your project must require the use of knowledge and skills acquired in your earlier engineering course work and incorporate appropriate engineering standards and multiple realistic constraints.
3. At a minimum your project must meet the ABET criteria c, e, f, g, and k listed below.

Directions: This form is to be completed by the student and design project faculty advisor. List the course and project information that will be substituting for CM 4861 CM Design Laboratory 2.

Name: ___________________________  Student ID: M __________________

Course: ___________________________  Credits: ______  Semester/Year: __________

Project Title: ___________________________

Abstract: This project must require the use of knowledge and skills acquired in the student’s earlier engineering course work and incorporate appropriate engineering standards and multiple realistic constraints. Attach an outline of the project scope and deliverables assigned to this student. Include additional supporting documents as needed.

ABET Criteria: At a minimum this project must meet the ABET criteria c, e, f, g, and k listed below. Check whether the student will:

- [ ] 3 (a) Apply knowledge of mathematics, science and engineering.
- [ ] 3 (b) Design and conduct experiments, as well as to analyze and interpret data.
- [ ] 3 (c) **Design a system, component, or process to meet desired needs.**
  - [ ] 3 (d) Function on multi-disciplinary team(s) as demonstrated by the execution of a team project that is too large, complex, or diverse for a single person. Partition a project into tasks and lay out a project plan. Execute the project and produce the required deliverables.
- [ ] 3 (e) **Identify, formulate and solve engineering problems.**
- [ ] 3 (f) **Demonstrate understanding of professional and ethical responsibility.**
- [ ] 3 (g) **Communicate effectively.**
  - [ ] 3 (h) Gain understanding of the impact of engineering solutions in a global, economic, environmental and societal context.
  - [ ] 3 (i) Recognize the need for, and an ability to engage in life-long learning.
  - [ ] 3 (j) Gain knowledge of contemporary issues.
- [ ] 3 (k) **Use the techniques, skills and modern engineering tools necessary for the practice of engineering.**

Student Signature ___________________________  Date __________

Design Project Faculty Advisor ___________________________  Date __________

Return signed form to the chemical engineering academic advisor.

Project Approved by: ___________________________  Lead Chemical Engineering Design Instructor __________

[ ] Suitable Eng Project  [ ] Meets min ABET criteria

Project Approved by: ___________________________  Lead Chemical Engineering Design Instructor __________

[ ] Senior-Design-Ready

To the Advisor: Student must receive passing grades in the courses listed above before eligibility can be determined. This completed form is to be attached to the corresponding Petition To Alter Degree Requirements.

Eligibility Checked by: ___________________________  Academic Advisor __________

[ ] Senior-Design-Ready

Updated 3/1/2010