Petition to Request 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 substitution 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 (can be taken concurrently)
   - 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, multiple realistic constraints, and economic considerations.

3. Your project must meet the same ABET criteria as CM 4861.

List the course and project information you are proposing to substitute for CM 4861 CM Design Laboratory 2 (1 credit).

Name: ___________________________  Student ID: M ___________________________

Course: ___________________________  Credits: _____  Semester/Year: ____________

Project Title: ___________________________

**Abstract:** Attach this form to an abstract delineating the project’s objectives and deliverables. (See reverse for abstract format.) This project must require the use of knowledge and skills acquired in the student’s earlier engineering course work and incorporate appropriate engineering standards, multiple realistic constraints, and economic considerations.

**ABET Criteria:** At a minimum, this project must meet the same ABET criteria as CM 4861 (criteria c, e, f, g, and k listed below). Check whether 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.
- **Required** 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.
- **Required** 3 (e) **Identify, formulate and solve engineering problems.**
- **Required** 3 (f) **Demonstrate understanding of professional and ethical responsibility.**
- **Required** 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.
- **Required** 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. **Due: Friday of Week 4 of Fall Semester.**

- [ ] Senior Design Ready
- [ ] Suitable Engg Project
- [ ] Meets ABET criteria

Approved by: ___________________________  Chemical Engineering ABET Committee Chair    Date

Approved by: ___________________________  Chem Engg Department Chair or Lead Design Instructor    Date

Updated 5/2/2017
Abstract format for Petition to Request CM 4861 Design Substitution

Two pages maximum
Due: Friday of Week 4 of Fall Semester.

Project Title

Design Objectives

Background

Design Constraints

Engineering Standards

Economic Considerations

Sponsor Interactions

Intended Deliverables

Team Organization