Engineering Faculty Document No. 30-05
March 22, 2006

TO: The Engineering Faculty
FROM: The EPICS Curriculum Committee
RE: New EPCS Course

The EPICS Curriculum Committee has approved the following new course. This action is now submitted to the Engineering Faculty with a recommendation for approval.

EPCS 202 SOPHOMORE PARTICIPATION IN EPICS
Offered Fall and Spring, Summer by special arrangement. Credit 2.
Prerequisites: EPCS 101 or 201 and sophomore standing and permission of instructor.

Course Description: Continuation of EPCS courses (see EPCS 101). Sophomores participating in EPCS 202 gain insight into the specific project, and, more generally, into the design and development process. They attend planning and reporting meetings with the customer and are expected to attend all team meetings. Under the mentorship of the team's juniors and seniors they perform and report upon tasks consistent with their level of discipline expertise. EPCS 202 is offered for 2 credits. May be repeated for credit.

REASON:

There are situations in which outstanding sophomore level students with previous EPICS course participation can become engaged at a sufficient level to earn two credit hours. This course allows the option, with instructor approval, for students to enroll at the two credits level reflecting the increased responsibility and workload associated with the two credit enrollment.

Normally Offered: Each Fall, Spring. Offered Summer by special arrangement.

Required Text(s): Service-Learning: Engineering in Your Community, Marybeth Lima and William Oakes, Great Lakes Press, 2004.

Recommended Reference(s): None.

Course Outcomes:

A student who successfully fulfills the course requirements with at least 3 credits of EPICS taken over 2 or more semesters will have demonstrated:

i. an ability to apply material from their discipline to the design of community-based projects
ii. an understanding of design as a start-to-finish process
iii. an ability to identify and acquire new knowledge as a part of the problem-solving/design process
iv. an awareness of the customer
v. an ability to function on multidisciplinary teams and an appreciation for the contributions from individuals from multiple disciplines
vi. an ability to communicate effectively with audiences with widely-varying backgrounds
vii. an awareness of professional ethics and responsibility
viii. an appreciation of the role that their discipline can play in social contexts

Lecture Outline:

Weeks	**Lectures**
1-15	All EPICS students have a common lecture hour. Lecture topics include the design process, verbal and written communication, project management and planning, ethical and legal issues in engineering design, entrepreneurship, intellectual property, team dynamics and leadership and community involvement. Lectures are supplemented with sessions on specific technical topics relevant to the projects.

Lab Outline:

Week	**Major Course Milestones**
2	Semester Project Plan
3	Personal Semester Goals
4	Project Charters (new projects); Project Demonstration (continuing projects); Review of Design Notebooks; Delivery Review of Projects to be Delivered Week 4.
5 - 6	Continued Progress on Projects and Project Documentation.
7	Internal Design Review; oral or poster presentation

8	Peer evaluation and self assessment; Review of Design Notebooks.
9 - 10	Continued Progress on Projects and Project Documentation
11	Project Design Review; Delivery Review of Projects to be Delivered Week 11.
12 - 14	Continued Progress on Projects and Project Documentation.
15	Team Report; Review of Design Notebooks; Peer evaluation and self assessment
Final	Team Presentation