Course Outline for ENGR 697: Engineering Design Project II (EE)

Required
Electrical Engineering

Bulletin Description
ENGR 697: Engineering Design Project II (2 units)
Prerequisite: ENGR 696. Completion of design project started in ENGR 696. Work is done with maximum independence under supervision of a faculty advisor. Oral and written project reports required.

Textbook
None

Coordinator
Tom Holton, Professor of Electrical Engineering

Prerequisites by Topic
1. Knowledge of digital circuit design
2. Knowledge of analog circuit design
3. Knowledge of high level language programming
4. Knowledge of technical communication, presentation and documentation

Course Objectives
1. To learn to analyze and design systems, components or processes. [B.1]
2. To acquire an ability to design and conduct experiments, analyze and interpret data. [B.2]
3. To acquire an awareness of professional and ethical responsibilities. [C.3]
4. To acquire ability to work effectively in multi-disciplinary teams. [A.4]
5. To acquire an ability to present technical information in both oral and written. [A.5]

1 Numbers in brackets refer to the educational objectives and outcomes of the School of Engineering.
Topics
1. Design process and methodology
2. Scheduling and time management
3. Literature, resource, and component information gathering
4. Oral and written communication
5. Costs
6. Ethics
7. Professionalism

Professional Component
Engineering Sciences  0 %
Engineering Design    100 %

Evaluation
1. Midterm formal oral presentation  20%
2. Final formal oral presentation   20%
3. Final formal report and poster presentations & product delivery 50%
4. Participation in class, group meetings & seminars   10%

Performance Criteria

Objective 1
1.1 Student will demonstrate an ability to analyze a real world problem. [2, 3]
1.2 Student will demonstrate an ability to design digital circuits. [2, 3]
1.3 Student will demonstrate an ability to design analog circuits. [2, 3]
1.4 Student will demonstrate an ability to integrate knowledge gained in various engineering courses. [2, 3]
1.5 Student will demonstrate an ability to search literature for information relevant to his/her project. [2, 3]

Objective 2
2.1 Student will demonstrate an ability to design and conduct experiments, and analyze and interpret data. [2, 3]

Objective 3
3.1 Student will acquire an ability to work effectively in multi-disciplinary teams. [1, 3, 4]

Objective 4
4.1 Student will acquire an ability to present technical information in both oral and written form. [2, 3]

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2 Numbers in brackets refer to the evaluation methods used to assess student performance.
Spring Semester, 2005
Instructor: Hamid Shahnasser
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Office: SCI 170

Class/Laboratory Schedule
One 2-hour-45-minute lab session/week

Prepared by
Hamid Shahnasser, Spring, 2005