Catalog Description

ECE 360 Principles of Design 2R-6L-4C W/S
Pre: ES 205, EC 260 and at least three of the EC core courses Co: RH 330.

A formal design course that emphasizes the design process. Project management, project reporting and decision-making are learned by student teams as they carry a project through several stages of a formal design process.

Goals

1. Students shall demonstrate an understanding of engineering design methodology.
2. Students shall demonstrate an understanding of the characteristics of successful product development.

Objectives

After completing this course a student should be able to:

1. Work in a multi-discipline team;
2. Carry a project from product design specification through conceptual design leading to detail design;
3. Gather, analyze and synthesize information and make decisions;
4. Prepare, maintain, and deliver technical communications: PDS, agendas, minutes, memos, web pages, progress reports, funding proposal and oral presentations;
5. Use professional publications, databases, and information resources;
6. Adhere to standards of professional practice and follow the IEEE code of ethics.

Student Responsibilities

1. Students in ECE360 will work project assignments in teams of 3-4 students;
2. Each student is responsible for individual assignments and quizzes;
3. Each student is responsible to participate in all team activities in a professional manner;
4. Each team is responsible for successful completion of their project;
5. Each team will be responsible for their organization, scheduling, technical activities, and individual tasks as needed to complete assignments;
6. Each team is responsible for keeping the faculty mentor and all team members informed at all stages of their project through memos and web pages;
7. Each team is responsible for all technical, written, and oral reports of their project.

Faculty Mentor Responsibilities

1. Conducts classroom activities in order to facilitate students meeting the course objectives;
2. Makes assignments, leads classroom discussions, and tests students knowledge;
3. Provides oversight (but NO technical contributions) of project teams;
4. Provides systematic and regular feedback on team writing tasks;
5. Meets regularly with each project team;
6. Decides upon each team’s project grade.
Course Grades

Team Component – 60%
Weekly progress reports, team meeting agendas, and team meeting minutes (posted on team web page no later than Monday class time) – 20%
Written Documents (PDS, interim report and funding proposal) and Oral Presentation – 60%
Mentor Evaluation of each TEAM’s attitude, teamwork, and work ethic – 20%

Individual Component – 40%
Weekly quizzes (Friday) over reading assignments and classroom discussions – 50%
Personal Inventories and Professional Development Plan – 10%
Mentor Evaluation of YOUR attitude and work ethic – 40%

This course is not graded on a curve. Everyone in the class has an equal opportunity to earn an A or an F. Typically, grades are earned based upon the scoring schedule shown below:

- YourScore>90%: A
- 80%<YourScore<90%: B
- 70%<YourScore<80%: C
- 60%<YourScore<70%: D;
- Performance levels below 60% are usually unacceptable and will result in a failing grade.

Course Procedures

Classes will begin promptly at 8:05AM.
Classroom Meetings will be held MTRF with Fridays (and other days as deemed appropriate) set aside for team meetings in the WORX.
Classroom activities will include, but not limited to lectures, discussions, guest lectures, active learning exercises, and short weekly quizzes prior to Friday team meetings.
Individual Reading and Homework assignments will be made regularly.
Many team writing assignments (PDS, team meeting agendas and minutes, weekly progress reports posted on team web page, interim project report, business plan, funding proposal, etc.) will be made throughout the term.
All team communications (agendas, minutes, progress reports, PDS, funding proposal, and powerpoint file of oral presentation) will be compiled and submitted on a CDROM at oral presentation.
All team emails to the instructor will have a subject line that reads: “ECE360 – Team XXX” where XXX indicates the name chosen by the team; nothing more, nothing less or my email filter will reject it and I won’t see it.
Each team will determine the roles of their members (leader, webmaster, recorder, etc.) and will set the meeting times for all meetings held outside of class time.