

Senior Electrical Engineering Design (55:089)
(Required: All Tracks)

Catalog Description:

Team project; demonstration of completed project and formal engineering report

Pre(co)requisites:

Senior standing required. Must be taken in the semester immediately following successful completion of 55:088 [P]

Textbook:

None

References:

None

Topics:

1. Two interim and one comprehensive written reports
2. One oral presentation
3. One poster presentation
4. Project web site

Laboratory Projects:

This is an independent design course. Student teams work on their own during the semester to complete their chosen project. Students have access to all ECE Department teaching laboratory facilities

Class/Laboratory Schedule:

Several class meetings are held for midterm and final oral presentations. Otherwise student teams work in a self-directed manner.

Writing Assignments and Oral Presentations:

Student teams must complete a written mid-term progress report and a comprehensive final project report. The final project report has a specified format and is graded for style, grammar, and spelling in addition to content. Student teams also do mid-term and final oral presentations. The final project presentation is done in form of a Design Review Board that includes the project customer, course instructor, and at least one other faculty member. Student teams must also create posters describing their projects for display at a public poster session.

Design Component:

Student teams complete the capstone design project started in the previous semester in the course 55:088, Principles of EE Design. Students must design, implement, test, and demonstrate a significant project. Projects must have an identified customer and must address realistic design constraints.

Contribution to the Requirements of Criterion 5:

Engineering topics: 3 s.h.

Course Goals: Basis for Assessment and Mapping onto Outcomes

Course Goal	Basis For Goal Assessment	Supports ABET Outcomes
1. The student will demonstrate the ability to carry out a comprehensive design project.	Written and oral reports, instructor evaluation	a(●), b(●), c(●), d(●), e(●), f(●), g(●), h(●), i(●), j(●), k(●)
2. The student will develop a written proposal describing his/her chosen design project.	Written proposal	a(●), b(●), c(●), d(●), e(●), f(●), g(●), h(●), i(●), j(●), k(●)
3. The student will make an oral presentation on the proposal.	Oral proposal	a(●), b(●), c(●), d(●), e(●), f(●), g(●), h(●), i(●), j(●), k(●)
4. The student will develop a written progress report describing progress that has been made.	Written progress report	a(●), b(●), c(●), d(●), e(●), f(●), g(●), h(●), i(●), j(●), k(●)
5. The student will make an oral presentation on the progress report.	Oral progress report	a(●), b(●), c(●), d(●), e(●), f(●), g(●), h(●), i(●), j(●), k(●)
6. The student will develop a written final report describing the complete design project.	Final report	a(●), b(●), c(●), d(●), e(●), f(●), g(●), h(●), i(●), j(●), k(●)
7. The student will make a final oral presentation, including a demonstration, on the completed design project.	Oral presentation, evaluation by Design Review Board	a(●), b(●), c(●), d(●), e(●), f(●), g(●), h(●), i(●), j(●), k(●)

○ denote moderate contribution to the outcome; ● denote substantial contribution to the outcome

Performance Criteria:

Instructor completes a Course Outcome Rating (COR) that quantitatively evaluates student performance for each course goal-related outcome using a standard scale (4.0 = outstanding ability; 3.0 = good ability; 2.0 = adequate ability; 1.0 = poor ability; 0.0 = no ability). Instructor chooses appropriate graded course artifacts (homework questions, exam questions, etc) for each outcome rating. COR scores below 2.5 are indicative of problems with meeting course goals/outcomes and COR scores below 2.0 indicate failure to adequately meet course goals/outcomes.

Prepared By:

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