Electrical Engineering 4096: Electrical Engineering Senior Project I
Prior Number - Electrical Engineering 391

Credit and Contact Hours
1 credit hour lecture (One 50-minute session per week and one 50-minute seminar per week are typical).

Instructor

Text(s)
No required text, handouts

Course Information

Course Description
A complete design cycle. Working in small teams, students will design, document, analyze, implement and test a product. Topics include: Iteration in design, prototyping, group dynamics, design reviews, making effective presentations, concurrent design, designing for test, ethics and standards, testing and evaluation.

Prerequisites
Economics 1100 (121) or 1200 (122), English 3560 (160), Computer Engineering 2210 (111), and at least three of the following: Electrical engineering 3100 (253), Electrical Engineering 3320 (231), Electrical Engineering 3430, Electrical Engineering 3500 (205), Electrical Engineering 3540 (207), and Electrical Engineering 3600 (271).

Required or Elective
Required for electrical and computer engineering majors
Co-listed with Computer Engineering 4096 (391)

Course Goals

General Outcomes
1. Understand the engineering design process
2. Recognize ethical issues in engineering and methods to resolve them
3. Recognize means of protecting intellectual property
4. Develop and write a proposal to solve a design problem
5. Effectively present team proposal to a group of peers and supervisors
6. Complete a (simple) engineering design project
7. Plan for graduate school and their career
8. Understand leadership skills required for success in engineering
### Relationship of Course to Program Outcomes

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S – strong connection; M – medium connection; W – weak connection

### Topics Covered

1. Engineering design process (3 weeks)
2. Intellectual property (1 week)
3. Writing and revising the proposal (1 week)
4. Effective presentations (1 week)
5. Ethics (1 week)
6. Creativity (1 week)
7. Project management, working in teams (1 week)
8. Project development hints (PCB design, components, etc) (2 weeks)
9. Project team proposal presentation (4 weeks)