Electrical Engineering (E E)

E E 402W Senior Project Design in Electromagnetics (3) Project designs of antenna and microwave systems, with an emphasis on technical communications skills. Lab.

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E E 402W is intended to give senior-year electrical engineering students a "real-world simulation" of a total design experience. The focus is on electromagnetic engineering design applications such as antennas and filters, which are developed as semester projects. This is accomplished through both lectures and a laboratory component.

One period each week is devoted to general lectures concerning professional engineering topics. The subjects of these lectures vary but generally are concerned with topics that are not purely technical in nature, such as laboratory safety, quality control, reliability, entrepreneurship, job interviewing, deciding to go to graduate school, ethics, etc.

The remaining weekly lecture and the laboratory focus on the design process. The designs are developed in a proposal and formulated in the preliminary design review. Background readings and published papers are searched to find ideas for the design. The process includes a Critical Design Review and an oral presentation to judges.

Realistic industrial assignments are developed with modern equipment such as network analyzers and spectrum analyzers. Computer Aided Design software is available to help students do a layout and simulation of the project performance. Simulated results are presented along with measurements to compare theory and practical results. The final written report should provide appropriate detail and references of student's work.

General Education: None
Diversity: None
Bachelor of Arts: None
Effective: Spring 2001
Prerequisite: E E 330(/bulletins/bluebook/university_course_descriptions.cfm?letter=E&courselong=E_E|330|latest) . Prerequisite or concurrent: ENGL 202C(/bulletins/bluebook/university_course_descriptions.cfm?letter=E&courselong=ENGL|202C|latest)

Note : Class size, frequency of offering, and evaluation methods will vary by location and instructor. For these details check the specific course syllabus.