EEE 490 - Senior Design Laboratory

Catalog Data: EEE 490 Senior Design Laboratory. (3) F,S
Project oriented laboratory. Each student will complete one or more
design projects during the semester. Lecture, lab. Prerequisite: ECE
334; EEE 303; senior status or instructor approval.

Textbook: Mike Markel, *Writing in the Technical Fields*, IEEE PRESS, NY,
NY, 1994

Coordinator: Richard Kelly, Professor

Goals:
Senior EE students are given the opportunity to work on real world problems entailing problem
formulation, creativity, economics, and reliability (with possible environmental and social
impact) to obtain solutions. Of equal importance is the goal to develop skills in written and oral
presentation of technical subjects.

Prerequisites by Topics:
1. Network analysis
2. Signal analysis
3. Analog and digital circuits
4. Electromechanics
5. Logic design
6. Physics and fabrication of diodes and transistors

(All of these topics may not be required for particular design projects. Senior standing in
Electrical Engineering is required.)

Lecture Topics:
1. Engineering methods and design criteria
2. Engineering economics and reliability
3. Logical organization of technical reports and presentations
4. Engineering ethics
5. Working in teams

Laboratory Projects, Reports and Presentations:
Form groups of three students to work on design problems selected from those submitted by the
faculty and engineer in local industry.

Each team is required to prepare written and oral reports as follows:
Proposal (written) 5%
Progress Reports (2 written) 10%
Progress Reports (2 oral) 10%
Final Oral Presentation 10%
Final Written Report 15%

EEE 490 - Continued

Fifty percent of the grade is based on the reports as indicated and 50% on the technical assessment made by the group advisor (the faculty member or engineer who proposed the project).

All the student activities are part of a normal design process.

Estimated ABET Category Content:

Engineering Design 3 Credits - 100%