EECE 490B: Senior Project Implementation

Prerequisites: EECE 490A and either EECE 316 or EECE 444.

Required for EE and CMPE majors

Catalog Description: In a continuation of EECE 490A, students complete detailed designs, construct, test, and demonstrate their senior design project. Design documentation must address sustainability, manufacturability and, if appropriate, health and safety issues. Formal oral and written reports documenting the project are required. Formerly ECE 290B.

Course Objectives:

- understand how to define, design and implement a complete system
- know how to develop a test plan based on requirements
- know how to test a project to determine whether it meets requirements

Course Outcomes:

Students must be able to:

- develop detailed design documents
- make oral presentations
- maintain a project schedule
- develop a test plan for a project
- build a system or system component
- test the operation of a system or component to prove it meets the requirements
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Course Plan

Week	EECE 490B Topics and Deliverables
#1	Course requirements and deliverables; Review of Project Concept , Requirements, and Detailed Design Document formats and content
#2	**Oral Project Status** and **Schedule update** due (**Oral presentation of your project in lecture**)
#3	Revised Project Concept , Project Requirements Document and Design Documents due; Discussion of parts acquisition, fabrication resources/techniques
#4	Individual team meetings to address problem areas
#5	**Final design documentation due**
#6	Written project status report
#7	Review of Test Plan template
#8	Final test plan and procedure due (ABET outcome b rubric evaluation)

#9	Individual team meetings to address problem areas
#10	**Oral Project Status** and **Schedule update** due **(Oral presentation of your project in lecture)**
#11	**Prototype/Interim Progress Demonstration**
#12	Review of Project Binder Requirement
#13	Review of Coding Documentation Standards
#14	Review of Presentation and Demonstration Guidelines
#15	**Final Presentation and Demonstration**
F	**Final Project Documentation due** (ABET outcome e rubric evaluation)

Homework Documents:

The following applies to each of the documents that must be submitted for this course. The term "final submission" means the last submission that can be made for credit.

- If rework is required on an assignment, it must be satisfactorily completed before the assignment will be approved.
- Points will be deducted from assignments that are turned in late.
- When any paper is resubmitted, you must ALWAYS include the original(s).
- All required documents must be submitted and approved for you to pass the course.

Grading Policy:

Assignment	Percentage of Grade
Participation	5%
Status reports – Presentations, Schedules	5%
Final Design	10%
Project Test Plan	10%
Prototype/Interim Progress Demonstration	10%
Project Documentation Binder	15%
Project Performance	40%
Final Presentation	5%

This course is used to verify that all EECE graduates meet Program Outcome b), "An ability to design and conduct experiments as well as analyze and interpret data." Therefore, in addition to the grading policy stated above, to pass students must meet additional requirements.

Assessment Mechanism and Criteria:

Assessment will be based on an evaluation of the test plan document and the final project report for ECE 490B, Senior Project. A student will demonstrate successful completion of this outcome by achieving a score of 10 of 14 based on the assessment rubric shown in the attached table.

See the attached outcome b) rubric for specific requirements.

This course is used to verify that all EECE graduates meet Program Outcome e): "An ability to identify, formulate, and solve engineering problems" Therefore, in addition to the grading policy stated above, to pass students must meet additional requirements.

Assessment Mechanism and Criteria:

Assessment will be based on the documentation produced for the two-semester senior project classes, EECE 490A and 490B. A student will demonstrate successful completion of this outcome by achieving a score of 16 of 22 (based on the assessment rubric shown in the attached table) on the project concept, requirements, and design documents.

See the attached outcome e) rubric for specific requirements.

Attendance Policy:

Roll will be taken each day and attendance is a factor into the grading.

Any student who has more than two unexcused absences during the semester will fail the course.

Cheating Policy:

First offense in any course: Zero on the paper or exam being graded and a permanent entry describing the cheating entered into the student's file.
Second offense in any course: F in the course grade, a permanent entry describing the cheating entered into the student's file, and referral of the cheating to Student Judicial Affairs.