

EECE490A:Senior Project Design And Documentation 3.0 Fa/Spr

Prerequisites: ENGL 130 (or its equivalent) with a grade of C- or higher

EECE343, EECE344, and either EECE316 or EECE444. EECE316 or EECE444 may be taken concurrently.

Catalog Description: Students prepare, plan, design and document a senior project. The complete design and documentation process must include the project concept with ethical, environmental, and social impact; project requirements; full and complete design; work schedule. Requirements and design shall address human factors, safety, reliability, maintainability, and customer cost. In addition to serving to communicate and document the project, the oral and written reports are required in order to meet the University's 'Writing Proficiency Requirement', and to provide materials for evaluating several ABET outcomes assessment criteria. This is a writing proficiency, WP, course; a grade of C- or better certifies writing proficiency for majors. 1.0 hour lecture, 4.0 hours activity. Formerly ECE 290A.

Course Objectives:

- gain experience defining, designing and managing a project
- learn how to design and properly document a project based on user and technical requirements
- gain experience giving technical presentations to groups

Course Outcomes:

Students must be able to:

- prepare a project concept document
- write a technical requirement document
- demonstrate design expertise via detailed design documents
- make oral presentations
- create and maintain a project schedule

Course Plan

Week	EECE 490A Topics and Deliverables
#1	Course requirements and deliverables: Review of Project Concept and Oral Status Report templates; Project Teams formation and in-class working section.
#2	One-on-One Project Concept Brainstorming with Instructor[10 minutes Per Student]
#3	<u>Project Concept due</u> ; Review Tech. Requirements Template; In-class Working Session

#4	One-on-One review/brainstorming on Tech. Requirements; [10 minutes per student]
#5	Review of Design Template ; Oral Presentation of Proj. Concept
#6	One-on-One Review of preliminary Design (Detailed Block Diagram, major components)
#7	Review of Test Plan template ; Draft of project requirements document due ; In-class working session
#8	Review of Status Report template ; One-on-One review of design progress
#9	Project Requirements Document due ; In-class working session
#10	Review of Project Schedule template; Key design portions and parts list due; In-class working session and design review.
#11	Oral Project Status due ; Class oral presentations by students.
#12	Detailed project design due(schematics, timing diagrams, flow charts, pseudocode, design calculations)
#13	Project Schedule due ; One-on-One review and discussion of design details [10 minutes per student]
#14	Design Documents due . Block Diagram, Schematics, Bill of materials, Timing Diagrams, Flow Diagrams, Pseudocode, Partial applications software. Project Description.
#15	Attend EECE490B Project Presentations.
#16	Written Status Report due; Project Documentation due

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.
- In order to pass this course, in addition to meeting course requirements listed in the ‘Grading Policy’ below, the student’s work must demonstrate that he/she has met ABET Outcomes ‘e’ (Ability to identify, formulate and solve engineering problems), and ‘g’ (Ability to communicate effectively). Assessment of these outcomes has been described in a separate handout.

Must attend all oral presentations and EECE 490B Project Presentations

Grading Policy:

Assignment	Percentage of Grade
Participation	10%
Project Concept	10%
Technical Requirements	15%
Design Quality, Complexity, Documentation	40%
Project Schedule	5%
Status Reports	5%
Project Documentation Binder	15%