



THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

Design II with Honors Thesis Project

ECE 4900H

Credit Hours:

3.00

Course Levels:

Undergraduate (1000-5000 level)

Course Components:

Lab

Course Description:

Application of design principles and methodology to conceptual and detailed technical design, implementation and testing, culminating in a capstone design project.

Prerequisites and Co-requisites:

Prereq: Honors standing, and permission of department, and: Option 1: 2560, 3010, 3020, 3027, 3030, 3040, 3050, 3090, 3900, and Sr standing, and enrollment in Electrical Engineering Program of Study (EES subplan) of the ECE major. Prereq or concur: 3080 or Philos1332. Option 2: 2050 or 2100; 3020, 3027, 3090, 3561, 3567, 3900, CSE 2231, and 2451, and Sr standing, and enrollment in Computer Engineering Program of Study (CES subplan). Prereq or concur: 3080 or Philos 1332, and ECE 5362.

Course Goals / Objectives:

- Demonstrate competence applying engineering design methods
 - Demonstrate competence in the management of a project
 - Demonstrate competence in a team-based environment. Student design is part of a larger research effort with others beyond the research advisor, e.g. other honors students, graduate students, faculty, research staff
 - Demonstrate mastery in technical writing and presentation skills
 - Design, build, demonstrate, and report on a major project, integrating material learned
 - Be exposed to relevant engineering standards
 - Demonstrate familiarity in considering multiple realistic constraints (e.g. economic, environmental, sustainability, manufacturability, ethical, health and safety, social and political issues) while carrying out their design
-

Course Topics:

- Senior project design
 - Project execution, test, and analysis
 - Documentation of project (Honor's Thesis document)
 - Final presentation (Honor's Thesis defense)
-

Designation:

Elective