



THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

Capstone Design II with Honors Thesis

ECE 4905H

Credit Hours:

3.00

Course Levels:

Undergraduate (1000-5000 level)

Course Components:

Lecture

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 3905 and 3090, or 3906; and permission of department.

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
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Course Topics:

- Course introduction and communications
 - Project execution
 - Test plans, test, and analysis
 - Documentation of project (Honor's Thesis document)
 - Team assessment meetings
 - Final presentation (Honor's Thesis defense)
 - Team project work
 - Individual project work
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Designation:

Elective