

## **Capstone Design II**

#### **ECE 4900**

#### **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 of a capstone project.

#### **Prerequisites and Co-requisites:**

Prereq: Option 1: 2560, 3010, 3020, 3027, 3030, 3040, 3050, 3090, and 3900, and Sr standing, and enrollment in Electrical Engineering Program of Study (EES subplan) of the ECE major. Prereq or concur: 3080 or Philos 1332. 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
- Demonstrate mastery in technical writing and presentation skill
- 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

# **Designation:** Required