

# **Capstone Design II**

## **ECE 4905**

#### **Credit Hours:**

3.00

#### **Course Levels:**

Undergraduate (1000-5000 level)

#### **Course Components:**

Lecture

Lab

### **Course Description:**

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

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

Prereq: 3905 and 3090, or 3906.

#### **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 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
- Demonstrate the ability to develop test plan and document the results

## **Course Topics:**

- Course re-introduction, formal etiquette, group dynamics, effective professional teams and communications
- Project execution
- Test plans, test, test procedure, test and analysis reports
- Final report
- Team assessment meeting
- Final presentation
- Team working project
- Independent work on project

## **Designation:**

Required