

## **EE 396 Junior Project**

**Credits:** EE students are required to take at least 2 credits.

**Categorization of credits:** engineering topic

**Instructor(s):** All EE faculty

**Textbook and Other Required Materials:** Varies with projects and is determined by the faculty advisor.

**Designation:** Required

**Catalog Description: EE 396 Junior Project (V)** Junior level individual or team project under EE faculty direction and guidance. The project provides design experience and develops practical skills. It may be a continuation of EE 296 or a new project. Repeatable unlimited times. Pre: 296 and junior standing or consent.

**Pre- and Co-requisites:** Pre-requisite: Junior standing and EE 296 Sophomore Project.

**Class/Lab Schedule:** Meetings are arranged by the student and faculty advisor.

### **Topics Covered:**

A student participates in intermediate-level design as part of a project, either individually or in a team. Most of the following topics will be covered:

- Data collection and analysis
- Design methodology
- Design tools
- Instruments
- Engineering standards
- Practical constraints

The number of hours dedicated to each topic depends on the project that is undertaken.

### **Course Objectives and Relationship to Program Objectives:**

A student participates in intermediate-level design as part of a project. Project activities provide a moderate amount of design experience. They include most of the following: open-ended design, data collection and analysis, and learning design methodologies, design tools, instruments, engineering standards, and practical constraints. The projects may be individually structured or in teams, where a team can be a mix of beginning to advanced level students. The

project may be a continuation of an EE 296 project or an entirely new project. A student must give 30 minutes of oral presentation and provide a written report. [The course addresses the following Program Objectives: 1, 2, and 4.]

### **Course Outcomes and Their Relationship to Program Outcomes**

The following are the course outcomes and the subset of Program Outcomes (numbered 1-7 in square braces "[ ]") they address:

- Accomplish intermediate-level design with respect to engineering standards and practical constraints. [1, 2, 7]
- Learn new design methodologies; tools; techniques for data collection and analysis; and/or instruments with minimal instruction from the faculty advisor. [7]
- Orally communicate design and engineering concepts effectively. [3]
- Prepare clear written reports. [3]

### **Contribution of Course to Meeting the Professional Component**

Engineering topics: 100%

### **Computer Usage:**

Varies depending on the project.

### **Design Credits and Features:**

The course has 1 design credit because it provides intermediate-level design experience.

**Person(s) Preparing Syllabus and Date:** Galen Sasaki for the Undergraduate Curriculum Committee, Nov. 19, 2003. Revised by W. Shiroma Dec. 12, 2008. Revised by Anthony Kuh Mar. 23, 2009. Reviewed by Yingfei Dong, Oct.6, 2014. Revised by Matthias Fripp, Jan. 21, 2021.