

EE 296 Sophomore Project

Credits: EE students are required to take at least 1 credit.

Categorization of credits: engineering topic

Instructor(s): All EE faculty

Designation: Required

Catalog Description: **EE 296 Sophomore Project (V)** Sophomore level individual or team project under EE faculty direction and guidance. The project provides design experience and develops practical skills. Repeatable unlimited times. Pre: sophomore standing or consent.

Pre- and Co-requisites: Pre-requisite: Sophomore standing.

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

Topics Covered:

A student participates in beginning-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.

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

Course Objectives and Relationship to Program Objectives:

A student participates in beginning-level design as part of a project. Project activities provide some 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. A student must give 30 minutes of oral presentation and provide a written report. [The course addresses the following Program Objectives: 1, 3, 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 beginning-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 0.5 design credits because it has beginning level design.

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.