

1. *Course number and name*

**ENGR 697: Engineering Design Project II**

2. *Credits and contact hours*

2 credit hours: one 2-hr, 45-min session per week

3. *Instructor's or course coordinator's name*

Instructor: Tom Holton, Professor of Electrical and Computer Engineering;

Kwok Siong Teh, Associate Professor of Mechanical Engineering

Course coordinator: Tom Holton, Professor of Electrical and Computer Engineering

4. *Text book, title, author, and year*

none.

5. *Specific course information*

a. *brief description of the content of the course (catalog description)*

Completion of design project started in ENGR 696. Work is done with maximum independence under supervision of a faculty advisor. Oral and written project reports required.

b. *prerequisites or co-requisites*

ENGR 696: Engineering Design Project I

c. *indicate whether a required, elective, or selected elective course in the program*

Required for Computer Engineering

Required for Electrical Engineering

Required for Mechanical Engineering.

6. *Specific goals for the course*

a. *specific outcomes of instruction, ex. The student will be able to explain the significance of current research about a particular topic.*

- Students will demonstrate an ability to apply knowledge of mathematics, science, and engineering
- Students will demonstrate an ability to design and conduct experiments, as well as to analyze and interpret data
- Students will demonstrate an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- Students will demonstrate an ability to function on multidisciplinary teams
- Students will demonstrate an ability to identify, formulate, and solve engineering problems
- Students will demonstrate an understanding of professional and ethical responsibility

- Students will demonstrate an ability to communicate effectively
- Students will demonstrate the possess the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
- Students will demonstrate a recognition of the need for, and an ability to engage in life-long learning
- Students will demonstrate a knowledge of contemporary issues
- Students will demonstrate an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

*b. explicitly indicate which of the student outcomes listed in Criterion 3 or any other outcomes are addressed by the course.*

Course addresses ABET Student Outcome(s): a, b, c, d, e, f, g, h, i, j, k.

7. *Brief list of topics to be covered*

- Design process and methodology
- Scheduling and time management
- Literature, resource, and component information gathering
- Oral and written communications
- Costs
- Professional ethics
- Professionalism
- Career seminars by engineering professionals