1. *Course number and name*
   ENGR 696: Engineering Design Project I

2. *Credits and contact hours*
   1 credit hour: one 2-hr, 45-min session per week

3. *Instructor's or course coordinator's name*
   Instructors: Tom Holton, Professor of Electrical 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)

   a. *other supplemental materials*
      Various course handouts.

5. *Specific course information*
   a. *brief description of the content of the course (catalog description)*
      Selection of design project, methods of research, time management, engineering professional practice and ethics. This course is 3rd in a series of courses (ENGR 300, 301 or 302, 696, and 697GW) that when completed with a C or better will culminate in the satisfaction of the University Written Eng Proficiency/GWAR if taken Fall 2009 or later.

   b. *prerequisites or co-requisites*
      ENGR 302 (for ME) or Engr 301 (for EE), and
      Senior standing with 21 units completed in upper-division engineering

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