1. Course number and name
   ENGR 696: Engineering Design Project I (EE/ME)

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, 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