1. Course number and name
   ENGR 290: Matlab Programming Introduction

2. Credits and contact hours
   1 credit hour

3. Instructor’s or course coordinator’s name
   Instructor: Kawai Lau
   Course coordinator: Cheng Chen, Associate Professor

4. Text book, title, author, and year
   No required text for this course

5. Specific course information
   a. brief description of the content of the course (catalog description)
      Basic introduction to MATLAB language: array manipulations; control-flow; script and function files; simple 2-D plotting and editing.
   b. prerequisites or co-requisites
      Sophomore standing or later
   c. indicate whether a required, elective, or selected elective course in the program
      Elective for Mechanical Engineering and Electrical 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 be introduced to the basic operations of the MATLAB language.
      • Students will write simple script files and function files in MATLAB.
      • Students will learn the effective use of the built-in features of 2-D plotting.
      • Students will learn the use of the built-in features of Simulink
   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, k

7. Brief list of topics to be covered
   • Basic operations of MATLAB.
   • MATLAB environment.
   • MATLAB functions.
   • Matrix computations.
   • Symbolic mathematics.
   • Numerical techniques.
   • Simulink