

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