ENGG*3150 F20: Introduction to MATLAB
Due: Week of September 28th, 2020

Create your own MATLAB code that includes a variable dictionary and add comments to each line of your code. You will submit a maximum of two pages (PDF file) that includes your code (with variable dictionary and comments) and figure.

1. **MATLAB Code and Figure (20 marks)**
   Your MATLAB code should include the following:
   - **a.** Load in the data provided (*.txt file)
   - **b.** Create variables for each column of data
   - **c.** Create a time vector based on a sample frequency of 100 Hz
   - **d.** Determine the maximum and minimum knee flexion/extension angle (degrees)
     - **i.** After you run your code, add a comment to the variable dictionary which provides the minimum and maximum knee flexion/extension angles
   - **e.** Create a figure with 3 subplots to show the following angle values for the knee: flexion-extension (degrees), abduction/adduction (degrees) and internal/external rotation (degrees) data over time (seconds)
     - **i.** Each subplot should use a different marker type and line colour
     - **ii.** Create a title for the figure
     - **iii.** Label the axes of each subplot, with the appropriate units in brackets

2. **Variable Dictionary and Comments (15 marks)**
   Create a comment header in your *.m file called *Variable Dictionary*. Fill out this section listing each of the variables declared in the file and a brief description of what it contains. Add comments for each line of your code, describing what that line of code does.