# Problem Set for 2/19/2024

Engineering 104 - Fundamentals of Engineering Computing

**Formatting, Organization & Code Comments** - Complete the following problems in `Python` and include as part of the submission of the appropriate assignment. Your assignment file should include a proper heading, comments and show clear organizational structure with each problem clearly printed, separated and with each result variable clearly displayed. All problems worked should have a formatted/structured print-out. Print a string denoting each problem, with the solution to the problem clearly printed as a formatted string below the denoted problem. Separate each problem using a blank line in both the code and the printed results. Code comments should be completed throughout the file on every line of code by default. If this assignment requires you to write and submit additional auxiliary script, or any other files in the submission, please append your initials capitalized to the end of the file name.

**Python Lecture #14 Problems - Functions I (16 Points)**

*Problem 14.1 (4 Points)* - *Write a user defined function that prints out a statement declaring the volume of a box with square base based on the inputs of height, width and length. Test your function for* $h = 2$, $w = 3$ *and* $l = 5$.

*Problem 14.2 (4 Points)* - *Write a user defined function that prints out a statement declaring the volume of a circular cylinder based in the inputs of radius and height. Test your function for* $r = 2.5$ *and* $h = 5$.

*Problem 14.3 (4 Points)* - *Make problem 14.2 an anonymous/lambda function. Test your function for* $h = 2$, $w = 3$ *and* $l = 5$.

*Problem 14.4 (4 Points)* - *Repeat problem 14.2, but instead of print statements the function should return the cylinder volume and surface area as variables. Test your function for* $r = 2.5$ *and* $h = 5$.