**ECE 1111: Engineering Computation I**

**Homework No. 6: Array and String Manipulations**

**Goal:** Demonstrate that you can manipulate data types using pointers.

**Description:** There are two tasks in this homework assignment:

1. Rewrite Lab No. 5 so that you can read a matrix from a file whose rows are different lengths (each row contains a different number of elements):

**nedc\_000\_[1]: matrix\_print.exe m1.txt**

Demonstrate your program works by displaying the matrix on stdout. Explain how your code does dynamic memory allocation. (Hint: use a vector of float\* pointers to hold the matrix.)

1. Write a program that multiplies two matrices from files using the code developed in no. 1:

**nedc\_000\_[1]: matrix\_multipy.exe m1.txt m2.txt**

Your program should work for any size matrix and should produce an error if the matrices contained in the two files are different dimensions.

Submit your code and a demonstration that it operates correctly as a pdf file following the template provided in class. Provide sufficient evidence that your code works for all reasonable test cases.