CE 555: COMPUTINGLAB-1(0-0-2:1)

Tentative list of experiments

1. Creating and working with arrays of numbers
2. Creating and printing Simple 2DPlots
3. Creating, saving, and executing a script file
4. Creating and executing a function file
5. Manipulate matrices and use them as matrices or arrays
6. Create and work with anonymous functions
7. Work with symbolic mathematics toolbox
8. Saving, loading, importing, and exporting data
9. Creating 2-D/3-D plots with animation effects
10. Writing script/function file to execute problems on
    - Linear Algebra
    - Curve Fitting and Interpolation
    - Data Analysis and Statistics
    - Numerical Integration,
    - Ordinary Differential Equations

Text Books and References

1) Hahn, B. D. and Valentine, D. T., *"Essential MATLAB for scientists and engineers"*, Elsevier, 5th edition 2013.
2) *"MATLAB Student Version Releases"*, The Math Works, Inc, 2015.
3) Moler, C., *"Numerical Computing with MATLAB"*, The Math Works, Inc, 2004.
4) Kiusalaas, J., *"Numerical Methods in Engineering with MATLAB"*, Cambridge University Press, 2nd edition 2009.