

Week	Lecture Monday	Lab	Lecture Wednesday	Homework due
1	1-1 Intro 1-2 Variables Equations	MATLAB windows, create a script, create variables, plot, write equation	1-3 Functions IO Input, sin/cos, sqrt, exp, nthroot 1-4 Pseudo Code	
2	2-1 Arrays min, max, mean, sum, length, :, linspace	Create arrays (linspace, :, []), access arrays (:, ()), write an equation with an array, plot, swap variables	2-2 Plotting subplots, plot, polar, loglog, line styles	HW1: Write equations with scalar values
3	3-1 Ifs and Relational ops 3-2 Loops if/elseif/else, for, while	Write for loops, iterate through elements in for loop to calc sum, if statements, if statement in for/while loop	3-3 Plotting in loops, nested loops 3-4 Relational statements & ~ 3-5 Switches	HW2: Write equations with arrays, plot the results, different types of plots
4	4-1 Functions function files, anonymous functions 4-2 Global variables	Write a function file and an anonymous function. Use them. fplot versus plot. Local versus global variables.	Midterm I Equations, arrays, plots, simple if/while/for loops	HW3: For loops, while loops, if statements
5	5-1 FZero fzero, anonymous functions Lec 5-2 Newton's method	Using anonymous functions. Finding zeros of functions.	Lec 5-3 Numerical Integration integral, trapz	HW4: Create functions. Practice with iterative equations.
6	Lec 6-1 polynomials Lec 6-2 fitting	Using integral and trapz. Creating and evaluating polynomials. Simple function fit.	Lec 6-2 fitting (cont.) Lec 6-3 interpolation	HW5: Fzero, iterative functions, trapz/integral
7	Lec 7-1 matrix basics Creation, editing, matrix mathematical operations Lec 7-2 matrix operations Rotate, Scale, translate	Function fitting. Data point interpolation. Basic matrix creation and editing.	Midterm II Function fitting, integration, polynomials, roots, fzero	HW6: Function fitting, polynomials
8	Lec 8-1	Systems of linear equations	Lec 8-2 Multi-variable	HW7: Interp1,

	Systems of equations		functions	matrices
9	Lec 9-1 Strings 1 Lec 9-2 Writing to files	String manipulation to create titles and file names. Reading and writing data to files. 3D curve and surface.	Lec 9-3 Strings II	HW8: Matrices, 3D plotting, meshgrid, interp2
10	Lec 10-1 Surfaces	Surfaces, interp2	Review	HW9: Reading and writing files, string manipulation, surfaces
Finals			Final: Matrices, strings, multi-variable functions, surfaces, meshgrid	