Bare Essentials

At the end of this chapter you should be able to

1. Start MATLAB.

2. Define MATLAB variables and perform computations with them.

3. Know how to suppress printout with ;

4. Recognize built-in variables.

5. Use on-line `help` to get more information on a function.

6. Create matrices and vectors with direct assignment (using `[]`)

7. Extract elements from vectors and matrices with subscript notation.

8. Use colon notation to create vectors.

9. Use colon notation to extract ranges of elements from vectors and matrices.

10. Use `linspace` and `logspace` to create vectors.

11. Use the transpose operator.

12. Understand how to use array operators (`.*`, `./`, `.^`) *and* why they are different from the regular (`*`, `/`, `^`) operators.

13. Create and manipulate complex vectors and matrices.

14. Use path-changing commands to access files in different directories (folders) on your hard disk.

15. Use the `load` command to read data from a file.

16. Use the `plot` function to plot data stored in MATLAB variables.

An Expanded Core of Knowledge

After mastering the bare essentials you should move on to a deeper understanding of the fundamentals. Doing so involves being able to

1. Understand how to add and remove variables from the MATLAB workspace.

2. Create and manipulate string variables.

3. Create and manipulate MATLAB polynomials.

4. Use `contour`, `surf`, `plot3` etc. to create two and three-dimensional plots.

5. Reshape matrices with the `reshape` function and a trick with colon notation.

Developing Mastery

Working toward mastery of interactive Matlab usage you will need to know how to

1. Delete elements from vectors and matrices.

2. Perform low level input and output with `fopen`, `fscanf`, and `fclose`.