

Undocumented Matlab

unbelievable features; unbelievable quality; unbelievable cost effectiveness; unbelievable service

MATLAB FUNDAMENTALS

COURSE OUTLINE



1. The Matlab environment

- a. Learn how to use the Matlab desktop
- b. The Matlab workspace and command window
- c. Using the command history
- d. Using the documentation system and other online resources

2. Using numeric and character-based data

- a. Matlab's data types and precisions
- b. Matlab's data storage types
- c. Creating and manipulating data
- d. Operators and expressions
- e. Using functions
- f. Accessing sub-elements and data ranges

3. Matlab Programming

- a. Creating your first Matlab script
- b. The Matlab editor
- c. Using the debugger
- d. Scripts vs. functions
- e. Controlling program control flow
- f. Coding conventions and best practices

4. Analyzing data

- a. Removing and fixing invalid data
- b. Fitting data
- c. Error handling

5. Saving and loading data

- a. To/from Matlab workspace
- b. To/from text or binary files
- c. To/from Excel
- d. To/from a webpage

6. Visualizing data

- a. Displaying results in the command window
- b. Plotting data in 2D, 2.5D and 3D graphs
- c. Presenting data tables
- d. Preparing simple GUI (Graphical User Interfaces)
- e. Exporting graphics to external applications

7. Where next? – topics and resources for further learning

Summary

A 2-day introductory Matlab crash course.

You will learn:

- how to use Matlab to analyse data and report results
- how to load and save information using several file formats including text, binary and Excel
- how to automate analyses using basic programming and built-in functions
- how to create robust, reusable and maintainable code
- to design and present data in graphs and GUI windows
- the basic skills that will enable you to continue learning advanced topics by yourself, at your own pace

Target audience

Matlab users with some background in technical or science fields, but little or no experience using Matlab.

No prior programming experience is assumed or necessary.