

MATLAB[®] Day 2

An Interactive Hands On Workshop

Course Outline

Quick review of the basics

Basic numerical, character and graphical operations. Effective use of the MATLAB computing environment.

Advanced data types

The power and limitations of multidimensional arrays, cell arrays, and structures.

Advanced techniques

Strategies for development and debugging. Taking advantage of low level file input and output. More specialized operations and functions.

Higher level operations

Linear algebra and matrices, curve fitting, interpolation, Fourier transforms, optimization.

Advanced graphics

Specialized plots and images. Handle graphics for flexible and precise control. Graphical user interfaces for interaction.

Examples in data analysis, signal processing and image processing

This course will normally be customized to address client needs and interests. The use of client data is encouraged.

Resources

Recommended books. How to find and use available MATLAB code.

Summary

This one day intensive course explores intermediate and advanced features of the MATLAB environment and develops intermediate programming skills. The emphasis is on quickly developing code that is correct, maintainable and efficient.

What you will learn

- Getting results effectively.
- Programming complex tasks.
- Best use of advanced data types.
- Reading and writing complex files.
- Making presentation quality graphics.
- Specific techniques to meet your needs.

Who should attend

Engineers, scientists and programmers who have experience with MATLAB. Self taught MATLAB programmers who want a solid foundation. Those interested in mathematical programming, data analysis, or visualization.

Instructor

Richard Johnson is the developer of the Data Visualization Toolbox for MATLAB, the author of the MATLAB Programming Style Guide, and an independent MATLAB instructor for 6 years. As a former Associate Professor at Oregon State University, he has taught both university and industrial courses. He has a B.S. in Mathematics from Purdue University and a Ph.D. in Engineering Science from UCSD.