



Course Title:

Building Interactive Applications in MATLAB

Course Purpose:

This one-day course demonstrates how to create an interactive user interface for your applications in MATLAB®. Attendees will learn about user interface controls, such as push buttons, sliders, and menus, and how to use them to create a robust and user-friendly interface to your MATLAB application. No prior experience of programming graphical interfaces is required. Topics include:

- Laying out apps in the App Designer environment
- Creating callback functions for interactive components
- Creating and updating graphical objects in apps
- Making app components responsive to user behavior
- Creating apps with multiple windows

Pre- requisites:

MATLAB Fundamentals



- ✓ One training day
- ✓ Hours: 09:00-17:00
- ✓ Total training hours: 8

Teaching method:

The course combines lectures, demonstrations and practical exercises in MATLAB, using original training books from MathWorks. The course is in Hebrew but the training materials are in English.

עמוד מס' 1

Training Center Systematics - Contact information:

Phone number: 03-7660111 Ext: 5 **Email:** training@systematics.co.il

Website: <http://www.systematics.co.il/mathworks>



Course Objective:

Using the App Designer Environment

Objective: Use App Designer to create and share an app by laying out components and giving them interactive behavior.

- Working in the App Designer interface
- Adding callbacks to components
- Programming callback functionality
- Sharing apps with others

Creating and Updating Plots

Objective: Create apps with graphical elements that can be modified by user interaction, as well as apps with continuously adjustable components.

- Using plotting functions within apps
- Accessing graphical objects within apps
- Programming components to update the app continuously
- Sharing callbacks between multiple components
- Adding helper and startup functionality

Creating Responsive Components

Objective: Create robust and flexible apps with components that adapt appropriately to user actions.

- Adding and using local application data
- Working with grouped components
- Modifying component properties

Managing Multiple Windows and Apps

Objective: Create apps that use extra dialog windows and helper apps.

- Using standard dialog windows
- Catching errors
- Creating helper apps
- Passing application data between apps

עמוד מס' 2

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