

LabVIEW Training

COURSE CONTENT

GET IN TOUCH



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About Multisoft

Train yourself with the best and develop valuable in-demand skills with Multisoft Systems. A leading certification training provider, Multisoft collaborates with top technologies to bring world-class one-on-one and certification trainings. With the goal to empower professionals and business across the globe, we offer more than 1500 training courses, which are delivered by Multisoft's global subject matter experts. We offer tailored corporate training; project Based Training, comprehensive learning solution with lifetime e-learning access, after training support and globally recognized training certificates.

About Course

LabVIEW Training by Multisoft Systems offers an immersive learning experience on the LabVIEW programming environment, focusing on its applications for engineering and scientific purposes. Participants will gain hands-on experience with real-world projects, enhancing their skills in designing and implementing solutions using LabVIEW.

Module 1: Introduction to Automation

- ✓ Brief Description of a Control System
- ✓ Micro Controller, PID Controller, PLC Controller
- ✓ History & Need of Industrial Automation
- ✓ Application of Industrial Automation
- ✓ Basic Components of Automation
- ✓ Hardware Classification of Automation

Module 2: LabVIEW Environment Basics

- ✓ Front Panel
- ✓ Controls Palette
- ✓ Controls and Indicators
- ✓ Block Diagram
- ✓ Terminals
- ✓ Controls, Indicators, and Constants
- ✓ Block Diagram Nodes
- ✓ Functions Palette
- ✓ Searching for Controls, VIs and Functions

Module 3: Start using LabVIEW

- ✓ The LabVIEW Environment
- ✓ Front Panel
- ✓ Block Diagram
- ✓ Controls Palette
- ✓ Numeric Sub Palette
- ✓ Boolean Sub Palette
- ✓ String & Path Sub Palette
- ✓ Function Palette
- ✓ Tools Palette

- ✓ Wiring
- ✓ Toolbar
- ✓ Execution
- ✓ The Objects short-cut menu
- ✓ Dataflow Programming
- ✓ Help
- ✓ Exercises

Module 4: Sub VIs

- ✓ Create New Sub VI from Scratch
- ✓ Input and Output Sub VI Connectors
- ✓ Icon Editor
- ✓ Create Sub VI from existing code
- ✓ Using Sub Vis
- ✓ Exercises

Module 5: Customize LabVIEW

- ✓ Exercises

Module 6: Graphical Programming

- ✓ Wires
- ✓ Automatically Wiring Objects
- ✓ Manually Wiring Objects

Module 7: Common Tools in LabVIEW

- ✓ Selecting a Tool
- ✓ Shortcut Menus
- ✓ Property Dialog Boxes
- ✓ Front Panel Window Toolbar

- ✓ Block Diagram Window Toolbar

Module 8: Debugging Tools in LabVIEW

- ✓ How to find errors
- ✓ Highlight Execution
- ✓ Probes
- ✓ Breakpoints
- ✓ Step into/over/out debugging
- ✓ Fixing Broken VIs
- ✓ Finding Causes for Broken VIs
- ✓ Common Causes of Broken VIs
- ✓ Fixing Incorrect Behavior
- ✓ Block Diagram Toolbar
- ✓ Probe Tool

Module 9: Programming in LabVIEW

- ✓ Data Structures
- ✓ Arrays
- ✓ Auto-Indexing
- ✓ Array Functions
- ✓ Clusters
- ✓ Cluster Order
- ✓ Cluster Elements
- ✓ Enumerated data
- ✓ Working with Strings
- ✓ Execution Structures
- ✓ While loops
- ✓ for loops
- ✓ Case structures
- ✓ Passing Data between Loop Iterations – shift registers

- ✓ Handling Errors – error handling and error clusters

Module 10: Error Handling

- ✓ Finding Errors
- ✓ Error Wiring
- ✓ Error handling in Sub VIs
- ✓ Error Handling
- ✓ Exercises

Module 11: Working with Projects

- ✓ Project Explorer
- ✓ Deployment
- ✓ Exercises

Module 12: Design Techniques

- ✓ Force Program Flow
- ✓ Shift Register
- ✓ State Programming Architecture
- ✓ Multiple Loops/Parallel programming
- ✓ Templates
- ✓ Exercises

Module 13: User Interface

- ✓ Properties
- ✓ Exercises

Module 14: Plotting Data

- ✓ Customizing
- ✓ Exercises

Module 15: Tips & Tricks

- ✓ 10 functions you need to know about
- ✓ The 10 most useful Short-cuts
- ✓ 5 Example Applications

Module 16: Additional Exercises