LabVIEW Core 2

The LabVIEW Core 2 course is an extension of LabVIEW Core 1 and teaches you to use common design patterns to successfully implement and distribute LabVIEW applications for research, engineering, and testing environments. Topics covered include programmatic control of your user interface, techniques to optimize reuse of existing code, use of file I/O functions, and tools to create executables and installers. This course directly links LabVIEW functionality to your application needs and provides a jump-start for application development

Classroom: 2 days

On-Site: 2 days

Virtual: four 4-hour sessions

Online: self-paced

Coursework Goals

- Use local variables to modify front panel controls or stop parallel loops
- Apply common design patterns that use queues and events
- Programmatically control user interface objects
- Evaluate file I/O formats and use them in applications
- Modify existing code for improved usability
- Prepare, build, debug, and deploy stand-alone applications

Prerequisites

- Experience with Microsoft Windows
- LabVIEW Core 1 or equivalent experience

NI Products Used

- LabVIEW Professional Development System
- NI data acquisition device

Coursework Topics

Using Variables

Learn how to use local variables to modify front panel control values, stop parallel loops, and circumvent dataflow limitations. Topics include communicating between parallel loops and writing to controls and reading from indicators.

Communicating Data Between Parallel Loops

Explore asynchronous communication techniques for creating code that is UI-driven and synchronizes data between parallel loops. Topics include using queues to pass buffered data between loops and using notifiers to broadcast data to multiple loops.

Implementing Design Patterns

Get an introduction to design patterns and learn about the specific benefits and functionality of these design patterns. See how they can be used to reduce development time and learn two different categories of programming design patterns: single loop and multiple loops.

Controlling the User interface

Study methods to control the attributes of front panel objects programmatically, such as temporarily disabling a control. Learn how to use the VI Server to access the properties and methods of front panel objects

Improving an Existing Vi

Focus on methods to refactor inherited LabVIEW code and how to maximize the reuse of existing code. Refactoring is the process of redesigning software to make it more readable and maintainable without altering its observable behavior.

Creating and Distributing Applications

See the process of creating stand-alone executables and installers for LabVIEW applications. Learn how to use the Application Builder in LabVIEW. Topics include preparing your files, creating build specifications, and more.

Suggested Next Courses:

- LabVIEW Core 3
- Data Acquisition and Signal Conditioning
- Embedded Control and Monitoring Using LabVIEW
- LabVIEW Instrument Control
- Other hardware courses

Validate Your Expertise With an NI Certification

CLAD | Certified LabVIEW Associate Developer Certification

Prerequisite: None
Format: Multiple choice
Duration: 1 hour
Location: Pearson VUE testing centers or NI branch offices

Recertification Process

Recertification Interval: 2 years

About Haliatech

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