

Certified LabVIEW Associate Developer (CLAD)

Exam Preparation Resource Guide

Preparation Guide Goal:

This guide offers resources to aid a candidate in preparing for a CLAD exam. This document is by no means complete. Feedback and suggestions are solicited.

Exam Goal:

The CLAD exam validates foundational knowledge and skill level to develop and maintain LabVIEW applications.

Exam Topics (Outline):

- LabVIEW programming principles
- LabVIEW environment
- Data types, software constructs, and Graphical User Interface (GUI) elements
- Variables and functions
- Simple design patterns
- SubVI design
- VI design and documentation
- Error handling
- Debugging tools and techniques

Exam Prerequisite:

None

Exam Details:

- Administered and proctored by [Pearson Vue](#)
- 1-hour, computer-based, multiple choice exam
- Closed book. No LabVIEW or external resources allowed
- Exam results are available upon completion

Exam Grading:

- Passing grade: 70% or higher

Training / Tutorials:

- Free training materials:
 - [Online LabVIEW Basics](#)
 - [LabVIEW Introduction Course – Three Hours](#)
 - [LabVIEW Introduction Course - Six Hours](#)
- Paid training materials:
 - [National Instruments LabVIEW Basics I](#) and [LabVIEW Basics II](#) courses:
 - Instructor-led
 - Self-paced by using the course manuals
 - [National Instruments LabVIEW Upgrade Primer course \(online\)](#)

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Web Resources:

- [LabVIEW Development Guidelines](#)
- Free practice [LabVIEW Fundamentals Exam](#)
- [National Instruments Academic Web](#)
- [National Instruments Developer Zone](#)
- [National Instruments Developer \(LabVIEW\) Zone](#)
- [National Instruments LabVIEW Zone](#)
- [National Instruments LabVIEW Support](#)
- [LabVIEW Manuals Online](#) (current manuals)
- Free tutorials:
 - [LabVIEW Review](#) (Colorado School of Mines)
 - [LabVIEW Tutorial](#) (University of Sydney)
 - [LabVIEW for Dummies](#)® (Illinois Institute of Technology)
 - [LabVIEW Tutorial](#) (University of Buffalo)
 - [LabVIEW Tutorial Series](#) (University of Western Australia)

The following table lists additional resources for specific topics:

Topic	Details of resources by topic
LabVIEW programming principles	<ul style="list-style-type: none"> • Using a Polymorphic VI to Handle Inputs of Different Data Type, Representation, and Dimension • Polymorphic Units in LabVIEW
Data types, software constructs, GUI elements, and Property Nodes	<ul style="list-style-type: none"> • LabVIEW Data Storage • Handling Different LabVIEW Data Types • LabVIEW Custom Controls, Indicators, and Type Definitions • Graphs and Charts • Mechanical Action of Booleans • Loops and Structures • Formula Node Example • LabVIEW Strings, File I/O, and Property Nodes
Variables and functions	<ul style="list-style-type: none"> • Local and Global Variables • Arrays and Clusters • File I/O • Waveforms • <u>Examples:</u> <ul style="list-style-type: none"> ○ Controls: labview\examples\general ○ Express VIs: labview\examples\express
Simple design patterns	<ul style="list-style-type: none"> • Application Design Patterns: State Machines • LabVIEW Application Design Patterns