

# National Instruments Certification Program

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## 1. Program Overview

### A. Introduction

The National Instruments (NI) Certification Program provides professional recognition for individuals displaying a high degree of knowledge and skill with National Instruments products. Certifications are classified in one of two categories, technical or instructional.

- ◆ Technical certification is available for expertise on specific hardware, software, and the use of National Instruments products to provide solutions for industry.
- ◆ Instructional certification ensures that individuals presenting training on National Instruments products are able to effectively present complex technical subjects to adult audiences.

There are several active certifications within the NI Certification Program, each supported by examinations and training courses. The certifications and supporting structures are defined in the appropriate section of this certification plan.

### B. Goals for the NI Certification Program

- ◆ For new and experienced NI product users (professionals and students) to
  - Validate and gain recognition for their foundational NI product knowledge
  - Join the certified NI user community and continue to develop their NI product expertise through contact with other experienced users.
- ◆ Provide industry and academia with a standard for ensuring high levels of competency in providing solutions for their measurement, testing, and automation needs.
- ◆ Ensure a high degree of expertise in providing training to adult audiences on all National Instruments products.

### C. Description of NI Certification Program

The program has defined requirements for three levels of technical certification and one instructional certification. Certification requires that individuals successfully complete evaluations based on defined tasks and objectives in that area. Exam Topics for the certifications are the result of a Job and Task analysis for individuals performing work in measurement, automation, and testing areas. The Exam Topics are arranged in a hierarchical manner to ensure that evaluations build incrementally without redundancy or gaps.

The design of the program allows flexibility in the certification process, allowing individuals to tailor certification to their particular area of expertise. Some certification exams have pre-requisites designed as preparatory tools to validate baseline knowledge and skill evaluations. Further evaluations allow candidates to progress into advanced certification levels. Current certifications and their related skills are listed below.

#### Certified Associate Developer:

- Certified LabVIEW Associate Developer (CLAD)

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Candidates seeking an Associate Developer certification in LabVIEW must possess foundational knowledge of the LabVIEW programming environment, constructs, concepts and functions. They should be capable of demonstrating fundamental LabVIEW programming skills and must be able to develop an application from a set of requirements documents. They should also be capable of demonstrating competency in debugging, trouble-shooting and maintaining complex software applications.

## Certified Developer:

- Certified LabVIEW Developer (CLD)
- Certified LabWindows/CVI Developer (CCVID)
- Certified TestStand Developer (CTD)

Candidates seeking a Developer certification in LabVIEW or LabWindows/CVI should be capable of providing complex solutions for measurement and automation tasks. On the certification exam, they are evaluated on a comprehensive set of topics: programming style to support the development of modular, modifiable programs, advanced topics such as memory and performance issues, and inter-application communication. In addition, candidates are tested on their ability to create programs that incorporate accepted good programming standards and on their ability to debug, troubleshoot and maintain software applications.

Candidates seeking a Developer certification in TestStand should be able to develop optimized test sequences and test applications for test systems. The evaluation includes a detailed understanding of the TestStand environment and components of the TestStand architecture, the use of various features in the Sequence Editor that aid sequence development, the use of available tools to debug, troubleshoot, and maintain TestStand applications, and customizations that can be implemented in TestStand to create modular, flexible, and optimized Test applications incorporating accepted good programming standards

## Certified Architect:

- Certified LabVIEW Architect (CLA)
- Certified TestStand Architect (CTA)

Candidates seeking an architect certification in LabVIEW should be capable of architecting LabVIEW solutions and demonstrating the ability to lead a team of engineers to provide complex applications for business and industry. On the certification exam, candidates are evaluated on advanced software engineering concepts as applied to LabVIEW, and the use of these topics to generate specific hardware and software solutions.

Candidates seeking an architect certification in TestStand should be capable of providing complete, complex test solutions for industrial and commercial applications. The evaluation necessary for this certification includes topics relating to the use and configuration of TestStand, database connectivity, customization, and requires a good working knowledge of either LabVIEW or LabWindows/CVI.

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For a complete list of the Exam Topics associated with each certification, visit [www.ni.com/training](http://www.ni.com/training).

## Instructor Certification:

- Certified Professional Instructor (CPI)

The National Instruments Certified Professional Instructor is capable of providing in-depth technical training in a clear, understandable manner to adult learners. This certification is based on two distinct, but complimentary skill sets.

- The first is the widely recognized set of instructor competencies published by the International Board of Standards for Training, Performance, and Instruction.
- The second set of instructional skills is based on the characteristics and skills of a motivating instructor as defined by Raymond J. Wlodkowski.

The combination of these skill sets is evaluated by both written examination and an in-class observation. Unlike the technical certifications, the instructor certification requires course work. The skills of a good quality instructor include excellent interpersonal skills, which can only be ascertained through interaction with the instructional skills trainer. A technical certification, such as the Certified LabVIEW Developer credential, is a prerequisite for obtaining instructor certification. For a complete list of the requirements for this certification, refer to the National Instruments Certified Professional Instructor program description.

## D. Implementation

The NI certification program requires satisfactory completion of evaluations that show competency in specific areas. Each evaluation is based on the defined set of objectives that cover all the knowledge and skills required for that certification. The task list and associated objectives are available on request to persons interested in certification. There are no prerequisite courses for the technical evaluations, however National Instruments approved courses are available that provide training on the objectives.

Technical evaluations may consist of written questions covering both hardware and software, and/or a set of programming requirements to satisfy skill objectives related to software. All evaluations are proctored by designated persons that have no relationship to the examinee that could be considered a conflict of interest. Evaluations may be scheduled at the National Instruments main office in Austin, Texas, worldwide NI offices, or with a National Instruments Sales Representative. Additionally, some certification exams are available at Pearson VUE test centers and can be scheduled at [www.vue.com](http://www.vue.com).

The Architect-level certifications are National Instruments' highest level of certification. The normal progression through a certification path requires that a person earns Associate Developer certification as a pre-requisite to attempt Developer certification and that a person earns Developer certification as a pre-requisite to attempt Architect certification. Under special circumstances a person may bypass the Developer level examination. Requests to bypass the Developer level examination are reviewed on a case-by-case basis. Any person

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requesting to bypass any level examination must provide adequate documentation showing their advanced status. It is at the sole discretion of National Instruments whether or not to allow any level examination to be bypassed.

## E. Examinations

Examinations are based on Exam Topics and task analysis performed by National Instruments. Questions are based directly on the Exam Topics. Where a Topic has specific bulleted items, the items define the scope of the objective. Exam Topics that indicate a skill may be evaluated to the extent possible by written questions that test knowledges required to perform that skill, or by hands-on testing using supplied hardware and software.

All questions are selected from an examination question bank, allowing for each exam to consist of a unique set of questions. Exam security measures are taken to ensure that exam materials are not compromised, and that evaluations are conducted in a fair and unbiased manner. No external help in any form is allowed during an examination.

Examinations are scheduled at various locations worldwide. The examinee and/or Exam Administrator will select a suitable exam site. Please refer to the specific exam for its requirements. The examinee must provide writing utensils and possibly a four-function calculator. Each exam has a time limit suitable for the number of questions and complexity of the exam. No exam will require more than six hours to complete. The examinee is required to provide their own transportation and other associated arrangements for taking the exam.

The Exam Administrator at the location of the exam transmits a completed exam to National Instruments. National Instruments grades the exam and notifies the examinee in writing of the results. The passing criteria for all exams is 75%. If an examinee successfully passes the exam, National Instruments will register the person in the Certification Database and issue the certification to that person. Certificates are typically mailed approximately 4 weeks from the scheduled examination date.

## F. Maintaining Certification

Maintaining certification requires that the individual maintain currency in their particular area. Certified individuals are contacted by email of any additional requirements for maintaining their certification. These additions may be the result of software or hardware revisions, program enhancements, or other changes required by National Instruments to ensure a sound certification program. Time limits for completing additional requirements are determined as needed by National Instruments. It is the certified individuals responsibility to provide National Instruments with current contact information.

## 2. Individual Certification Descriptions

- A. Certified LabVIEW Associate Developer- Refer to the CLAD Requirements and Conditions document
- B. Certified LabVIEW Developer - Refer to the CLD Requirements and Conditions document
- C. Certified LabVIEW Architect - Refer to the CLA Requirements and Conditions document

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- D. Certified TestStand Developer – Refer to the CTD Requirements and Conditions document
- E. Certified TestStand Architect – Refer to the CTA Requirements and Conditions document
- F. Certified LabWindows /CVI Developer - Refer to the CCVID Requirements and Conditions document
- G. Certified Professional Instructor – Refer to the CPI Requirements and Conditions document

## 3. Testing Center Requirements

Candidates may take the Associate Developer certification examination by scheduling for the exam via Pearson Vue testing centers ([www.vue.com](http://www.vue.com))

Candidates may take Developer and Architect level certification examinations at the National Instruments headquarters in Austin, Texas, in National Instruments offices worldwide , a National Instruments Certified Training Center, or in selected hotel sites. In the instance of a Certified Training Center, only one person may be designated as a Certification Administrator at that Alliance Member location. This person is maintained in the National Instruments Certification Database as the contact for that Alliance Member location. Any changes in the status or designation of the certification administrator must be communicated to National Instruments in a timely manner.

Refer to the Certification Administrator agreement for details.