Preparation for Virtual Training

Thank you for your interest in the National Instruments' virtual training. Your local NI office will ship a course manual to you. Please run the connection test upon receipt of this letter to be sure that your computer system meets the requirements to attend this virtual course.

Follow the instructions online. Download the course materials before the course starts.

Preparation guidelines for your class can be found below:

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- **Virtual LabVIEW Core** 1
- **Virtual LabVIEW Core 2**
- **Virtual LabVIEW Core 3**
- **Virtual LabVIEW Connectivity**
- **Virtual Managing Software Engineering in LabVIEW**
- **Virtual Object-Oriented Design and Programming in LabVIEW**
- **Virtual LabVIEW Performance**
- **Virtual LabVIEW Machine Vision**
- **Virtual LabVIEW Real Time 1**
- **Virtual LabVIEW Real Time 2**
- **Virtual LabVIEW FPGA**
- **Virtual LabVIEW Instrument Control**
- **Virtual Sound and Vibration Fundamentals**
- **Virtual Modular Instruments High Speed Digital I/O**
- **Virtual Modular Instruments Switches**
- **Virtual Modular Instruments—Digital Multimeter (DMM)**
- **Virtual DIAdem Basics**
- **Virtual DIAdem Advanced**
- **Virtual LabWindows/CVI Core 1**
- **Virtual LabWindows/CVI Core 2**
- **Virtual Multisim**
- **Virtual Ultiboard**
- **Virtual TestStand 1**
- **Virtual TestStand 2**
- **Virtual Veristand Fundamentals**

Virtual LabVIEW Core 1

You have two options for completing your exercises: (1) remotely using National Instrument's Hardware Lab or (2) using your own computer.
1. Use National Instrument's Remote Lab through www.logmein.com. You do not need to have NI Software installed on your computer.
2. In order to complete the exercises on your computer, you must install several pieces of NI software. Please note, the download and installation of this software can take several hours to complete, so please begin this process immediately and have it completed before the course begins. You will need to create or log in to your www.ni.com user profile in order to access software downloads.

Evaluation version of LabVIEW software: https://lumen.ni.com/nicif/us/evaltlktsftdev/content.xhtml
Detailed training plan is available at:
http://www.ni.com/pdf/products/us/mkt-course-outline-labview-core-1.pdf

Suggested Reading:
Please read the following material before class. To access each topic, go to http://www.ni.com/info and enter the corresponding info codes listed for each topic. The Software Development Method document is designed to introduce you to the software development method used throughout the course in all exercises. By using the software development method, your code is more likely to be successful, readable, scalable, and maintainable.
· LabVIEW Core 1 - The Software Development Method
info code: softdev
Read the following documents for an introduction to the DAQ, GPIB, and serial hardware you use in class:
· Introduction to Data Acquisition
info code:daq
· GPIB Instrument Control Tutorial
info code:gpib
· Serial Communication Overview
info code:serial

Virtual LabVIEW Core 2

You have two options for completing your exercises: (1) remotely using National Instrument's Hardware Lab or (2) using your own computer.
1. Use National Instrument's Remote Lab through www.logmein.com. You do not need to have NI Software installed on your computer.
2. In order to complete the exercises on your computer, you must install several pieces of NI software. Please note, the download and installation of this software can take several hours to complete, so please begin this process immediately and have it completed before the course begins. You will need to create or log in to your www.ni.com user profile in order to access software downloads.

Evaluation version of LabVIEW software: https://lumen.ni.com/nicif/us/evaltlktsftdev/content.xhtml

Detailed training plan is available at:
http://www.ni.com/pdf/products/us/mkt-course-outline-labview-core-2.pdf

Virtual LabVIEW Core 3

You have two options for completing your exercises: (1) remotely using National Instrument's Hardware Lab or (2) using your own computer.
1. Use National Instrument's Remote Lab through www.logmein.com. You do not need to have NI Software installed on your computer.
2. In order to complete the exercises on your computer, you must install several pieces of NI software. Please note, the download and installation of this software can take several hours to complete, so please begin this process immediately and have it completed before the course begins. You will need to create or log in to your www.ni.com user profile in order to access software downloads.

Evaluation version of LabVIEW software: https://lumen.ni.com/nicif/us/evaltlktsftdev/content.xhtml

Detailed training plan is available at: http://www.ni.com/pdf/products/us/mkt-course-outline-labview-core-3.pdf

Pre-Course Work:
Please read the attached material before class.
Pre Course Work Boiler Controller Requirements.

Virtual LabVIEW Connectivity

You have two options for completing your exercises: (1) remotely using National Instrument's Hardware Lab or (2) using your own computer.
1. Use National Instrument's Remote Lab through www.logmein.com. You do not need to have NI Software installed on your computer.
2. In order to complete the exercises on your computer, you must install several pieces of NI software. Please note, the download and installation of this software can take several hours to complete, so please begin this process immediately and have it completed before the course begins. You will need to create or log in to your www.ni.com user profile in order to access software downloads.

Evaluation version of LabVIEW software: https://lumen.ni.com/nicif/us/evaltlktsftdev/content.xhtml

Evaluation version of LabVIEW Database Connectivity toolkit software:
https://lumen.ni.com/nicif/us/evaltlktdbconn/content.xhtml

Detailed training plan is available at: http://www.ni.com/pdf/products/us/lv-int-ii-mkt-course-outline.pdf

Virtual Managing Software Engineering in LabVIEW

You have two options for completing your exercises: (1) remotely using National Instrument's Hardware Lab or (2) using your own computer.
1. Use National Instrument's Remote Lab through www.logmein.com. You do not need to have NI Software installed on your computer.
2. In order to complete the exercises on your computer, you must install several pieces of NI software. Please note, the download and installation of this software can take several hours to complete, so please begin this process immediately and have it completed before the course begins. You will need to create or log in to your www.ni.com user profile in order to access software downloads.
Evaluation versions of LabVIEW, NI Requirements Gateway, NI LabVIEW VI Analyzer Toolkit, NI

LabVIEW Desktop Execution Trace Toolkit, and the NI LabVIEW Unit Test Framework:
https://lumen.ni.com/nicif/us/evaltlktsftdev/content.xhtml
Note: The evaluation version of LabVIEW does NOT include the Application Builder feature that is used in Lesson 6 of the course.

Detailed training plan is available at: http://www.ni.com/pdf/products/us/msel.pdf

Virtual Object-Oriented Design and Programming in LabVIEW

You have two options for completing your exercises: (1) remotely using National Instrument's Hardware Lab or (2) using your own computer.
1. Use National Instrument's Remote Lab through www.logmein.com. You do not need to have NI Software installed on your computer.
2. In order to complete the exercises on your computer, you must install several pieces of NI software. Please note, the download and installation of this software can take several hours to complete, so please begin this process immediately and have it completed before the course begins. You will need to create or log in to your www.ni.com user profile in order to access software downloads.

Evaluation version of LabVIEW software: https://lumen.ni.com/nicif/us/evaltlktsftdev/content.xhtml

Detailed training plan is available at:
http://www.ni.com/pdf/products/us/MKT_Course_Outline_OODPIL.pdf

Virtual LabVIEW Performance

You have two options for completing your exercises: (1) remotely using National Instrument's Hardware Lab or (2) using your own computer.
1. Use National Instrument's Remote Lab through www.logmein.com. You do not need to have NI Software installed on your computer.
2. In order to complete the exercises on your computer, you must install several pieces of NI software. Please note, the download and installation of this software can take several hours to complete, so please begin this process immediately and have it completed before the course begins. You will need to create or log in to your www.ni.com user profile in order to access software downloads.
Evaluation versions of LabVIEW, NI Requirements Gateway, NI LabVIEW VI Analyzer Toolkit and NI LabVIEW Desktop Execution Trace Toolkit: https://lumen.ni.com/nicif/us/evaltlktsftdev/content.xhtml

Detailed training plan is available at: http://www.ni.com/pdf/products/us/lv-perf-mkt-course-outline.pdf

Virtual LabVIEW Machine Vision

To complete your course exercises you will use the National Instrument's Remote Lab through www.logmein.com. You do not need to have LabVIEW installed on your computer.
Detailed training plan is available at: http://www.ni.com/pdf/products/us/imaqvisionout.pdf
Pre-Course Work:
Read through the attached self-study pdf. The LabVIEW Machine Vision self-study guide will introduce NI Vision, discuss how to prepare your imaging environment, and discuss how to acquire and display images in LabVIEW.

The beginning of the LabVIEW Machine Vision virtual class will review these topics and add additional demonstrations.
ftp://ftp.ni.com/support/customer_education/Online_Training/LabVIEW_Vision/Self%20Paced/LabVIEW%20Machine%20Vision%20online_Self-Study%20Guide.pdf

Virtual LabVIEW Real Time 1

To complete your course exercises you will use the National Instrument's Remote Lab through www.logmein.com. You do not need to have LabVIEW installed on your computer.
Detailed training plan is available at: http://www.ni.com/pdf/products/us/lvrt_app_dev.pdf

Virtual LabVIEW Real Time 2

To complete your course exercises you will use the National Instrument's Remote Lab through www.logmein.com. You do not need to have LabVIEW installed on your computer.

Detailed training plan is available at: http://www.ni.com/pdf/products/us/lvrt_app_dev_2.pdf

Virtual LabVIEW FPGA

To complete your course exercises you will use the National Instrument's Remote Lab through www.logmein.com. You do not need to have LabVIEW installed on your computer.

Detailed training plan is available at: http://www.ni.com/pdf/products/us/lvfpgaout.pdf

Virtual LabVIEW Instrument Control

To complete your course exercises you will use the National Instrument's Remote Lab through www.logmein.com. You do not need to have LabVIEW installed on your computer.

Detailed training plan is available at: http://www.ni.com/pdf/products/us/labviewinsconout.pdf

Virtual Sound and Vibration Fundamentals

To complete your course exercises you will use the National Instrument's Remote Lab through www.logmein.com. You do not need to have LabVIEW installed on your computer.

Detailed training plan is available at: http://www.ni.com/pdf/products/us/sandv_mkt_course_outline.pdf

Virtual Modular Instruments High Speed Digital I/O

To complete your course exercises you will use the National Instrument's Remote Lab through www.logmein.com. You do not need to have LabVIEW installed on your computer.

Detailed training plan is available at:
http://www.ni.com/pdf/products/us/mkt-course-outline-mod-inst-hsdio.pdf

Virtual Modular Instruments Switches

To complete your course exercises you will use the National Instrument's Remote Lab through www.logmein.com. You do not need to have LabVIEW installed on your computer.

Detailed training plan is available at:
http://www.ni.com/pdf/products/us/mkt-course-outline-mod-inst-switch.pdf

Virtual Modular Instruments—Digital Multimeter (DMM)

To complete your course exercises you will use the National Instrument's Remote Lab through www.logmein.com. You do not need to have LabVIEW installed on your computer.

Detailed training plan is available at:
http://www.ni.com/pdf/products/us/mkt-course-outline-mod-inst-dmm.pdf

Virtual DIAdem Basics

You have two options for completing your exercises: (1) remotely using National Instrument's Hardware Lab or (2) using your own computer.
1. Use National Instrument's Remote Lab through www.logmein.com. You do not need to have NI Software installed on your computer.
2. In order to complete the exercises on your computer, you must install several pieces of NI software. Please note, the download and installation of this software can take several hours to complete, so please begin this process immediately and have it completed before the course begins. You will need to create or log in to your www.ni.com user profile in order to access software downloads.

Evaluation version of DIAdem software: https://lumen.ni.com/nicif/us/evaldiadem81/content.xhtml
Detailed training plan is available at: http://www.ni.com/pdf/products/us/diadembasicsrevout.pdf

Virtual DIAdem Advanced

You have two options for completing your exercises: (1) remotely using National Instrument's Hardware Lab or (2) using your own computer.
1. Use National Instrument's Remote Lab through www.logmein.com. You do not need to have NI Software installed on your computer.
2. In order to complete the exercises on your computer, you must install several pieces of NI software. Please note, the download and installation of this software can take several hours to complete, so please

begin this process immediately and have it completed before the course begins. You will need to create or log in to your www.ni.com user profile in order to access software downloads.
Evaluation version of DIAdem software: https://lumen.ni.com/nicif/us/evaldiadem81/content.xhtml
Detailed training plan is available at: http://www.ni.com/pdf/products/us/diademadvout.pdf

Pre-work for DIAdem Advanced:
A course manual will be shipped to you. Once you receive your course manual, be sure to read Lesson 1. This material will be reviewed at the beginning of class, but will not be addressed in depth. If you have not received the course manual by the start of the course, you will have the opportunity to download the materials during the course.

Virtual LabWindows/CVI Core 1

You have two options for completing your exercises: (1) remotely using National Instrument's Hardware Lab or (2) using your own computer.
1. Use National Instrument's Remote Lab through www.logmein.com. You do not need to have NI Software installed on your computer.
2. In order to complete the exercises on your computer, you must install several pieces of NI software. Please note, the download and installation of this software can take several hours to complete, so please begin this process immediately and have it completed before the course begins. You will need to create or log in to your www.ni.com user profile in order to access software downloads.
Evaluation version of LabWindows/CVI: https://lumen.ni.com/nicif/us/evalcvi/content.xhtml

Detailed training plan is available at: http://www.ni.com/pdf/products/us/LabWindowsCVI1out.pdf

Virtual LabWindows/CVI Core 2

You have two options for completing your exercises: (1) remotely using National Instrument's Hardware Lab or (2) using your own computer.
1. Use National Instrument's Remote Lab through www.logmein.com. You do not need to have NI Software installed on your computer.
2. In order to complete the exercises on your computer, you must install several pieces of NI software. Please note, the download and installation of this software can take several hours to complete, so please begin this process immediately and have it completed before the course begins. You will need to create or log in to your www.ni.com user profile in order to access software downloads.
Evaluation version of LabWindows/CVI: https://lumen.ni.com/nicif/us/evalcvi/content.xhtml

Detailed training plan is available at: http://www.ni.com/pdf/products/us/LabWindowsCVI2out.pdf

Virtual Multisim

You have two options for completing your exercises: (1) remotely using National Instrument's Hardware Lab or (2) using your own computer.
1. Use National Instrument's Remote Lab through www.logmein.com. You do not need to have NI Software installed on your computer.
2. In order to complete the exercises on your computer, you will need to have Multisim Power Pro 11.0 or later installed; we recommend Multisim Power Pro 11.0 to have the latest version. If you are an academic user or if you do not have the software installed, please download it from the sites below. Please note, the

download and installation of Multisim can take several hours to complete, so please begin this process immediately and have it completed before the course begins. You will need to create or log in to your www.ni.com user profile in order to access software downloads.
Evaluation version of Multisim Power Pro: https://lumen.ni.com/nicif/us/evalmultisim/content.xhtml

Detailed training plan is available at: http://www.ni.com/pdf/products/us/multisim_basics_outline.pdf

Virtual Ultiboard

You have two options for completing your exercises: (1) remotely using National Instrument's Hardware Lab or (2) using your own computer.
1. Use National Instrument's Remote Lab through www.logmein.com. You do not need to have NI Software installed on your computer.
2. In order to complete the exercises on your computer, you will need to have Ultiboard Power Pro 11.0 or later installed, we recommend Ultiboard Power Pro 11.0 to have the latest version. If you are an academic user or if you do not have the software installed, please download it from the sites below. Please note, the download and installation of Ultiboard can take several hours to complete, so please begin this process immediately and have it completed before the course begins. You will need to create or log in to your www.ni.com user profile in order to access software downloads.
Evaluation version of Ultiboard Power Pro: https://lumen.ni.com/nicif/us/evalmultisim/content.xhtml
** Please note: if you have downloaded Circuit Design Suite already for a Multisim course, then you already have Ultiboard installed.*

Detailed training plan is available at: http://www.ni.com/pdf/products/us/ultiboard_basics_outline.pdf

Virtual TestStand 1

To complete your course exercises you will use the National Instrument's Remote Lab through www.logmein.com. You do not need to have LabVIEW installed on your computer.

Detailed training plan is available at: http://www.ni.com/pdf/products/us/mkt-course-outline-teststand-1.pdf

Virtual TestStand 2

To complete your course exercises you will use the National Instrument's Remote Lab through www.logmein.com. You do not need to have LabVIEW installed on your computer.

Detailed training plan is available at: http://www.ni.com/pdf/products/us/mkt-course-outline-teststand-2.pdf

Virtual Veristand Fundamentals

To complete your course exercises you will use the National Instrument's Remote Lab through www.logmein.com. You do not need to have Veristand installed on your computer.

Detailed training plan is available at:
http://www.ni.com/pdf/products/us/MKT_Course_Outline_VeriStand.pdf