

ControlLogix[®]/Studio 5000[™]

Studio 5000 Logix Designer Level 1: ControlLogix Fundamentals and Troubleshooting Course Description

COURSE AGENDA

- Locating ControlLogix Components
- Navigating through the Logix Designer Application
- Connecting a Computer to a Communications Network
- Downloading and Going Online
- Locating I/O Tags and Devices
- Interpreting Logix Designer Project Organization and Execution
- Interpreting Ladder Logic Structure
- Locating and Editing Tag Values
- Interpreting Bit Instructions
- Interpreting Frequently Used Instructions
- Interpreting Arrays
- Interpreting Tags of User-Defined Data Types
- Searching for Project Components
- Integrated Practice - Interpreting a Basic Project
- Forcing I/O and Toggling Bits
- Troubleshooting Digital I/O Problems
- Troubleshooting Analog I/O Problems
- Troubleshooting Remote I/O Problems
- Updating Logix5000 Firmware
- Troubleshooting Controller Problems
- Troubleshooting Power Supply Problems
- Analyzing and Troubleshooting a System Using a Trend Chart
- Integrated Practice-Troubleshooting Basic Projects
- Editing Ladder Logic Online
- Managing Logix Designer Project Files
- Documenting and Printing Components
- Troubleshooting Noise-Related Problems



COURSE NUMBER: CCP299

Course Purpose

Upon completion of this course, you should be able to troubleshoot a previously operational ControlLogix system and restore normal operation.

You will have the opportunity to develop and practice these skills by:

- Learning basic concepts and terminology used with:
 - ControlLogix system hardware
 - Studio 5000 Logix Designer application
- Practicing a systematic strategy for diagnosing and troubleshooting problems:
 - Configuration issues
 - Electrical noise
 - Faulty/malfunctioning field devices
 - Controller, I/O or other hardware issues
- Performing hands-on exercises

All Logix5000 systems use the same control engine; therefore, tasks are similar. You will see applicable references for other systems.

LISTEN.
THINK.
SOLVE.®

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Who Should Attend

This course is intended for individuals who need to maintain and troubleshoot a ControlLogix system – but have no current working experience with ControlLogix systems.

Curriculum Note: This course contains many of the lessons in courses CCP146 and CCP153 – in a consolidated four and a half-day format. Do not take all 3 courses.

Prerequisites

To successfully complete this course, the following prerequisites are required:

- Ability to perform basic Microsoft Windows® tasks
- Previous experience with common industrial control system concepts

Technology Requirements

All technology is provided for student use in the classroom by Rockwell Automation. It is not necessary for students to bring any technology with them when attending this course.

Student Materials

To enhance and facilitate your learning experience, the following materials are provided as part of the course package:

- *Student Manual:*
 - Contains the topical outlines and exercises.
 - Used to follow presentations, take notes, and work through exercises
- *Logix5000 System Glossary:*
 - Contains terms and definitions specific to Logix5000 systems
 - Defines key Logix5000 systems terminology
- *Studio 5000 Logix Designer and Logix5000 Procedures Guide:*
 - Provides the steps required to complete basic tasks that are common to all Logix5000 hardware platforms

Student Materials (continued)

- *Logix5000 Documentation Reference Guide:*
 - Searchable, electronic resource that contains frequently referenced technical documentation
- *ControlLogix Troubleshooting Guide:*
 - Contains a systematic approach to diagnosing and troubleshooting common ControlLogix system problems

Hands-On Exercises

Throughout this course, you will have the opportunity to practice the skills you have learned through a variety of hands-on exercises:

- Exercises focus on the skills introduced in each lesson.
- Integrated practices combine and practice several key skills at once.
- Exercises are performed on a ControlLogix workstation

Course Length

This is a four and a half-day course.

Course Number

The course number is CCP299.

IACET CEUs

CEUs Awarded: 3.2



To Register

To register for this or any other Rockwell Automation training course, contact your local authorized Allen-Bradley Distributor or your local Sales/Support office for a complete listing of courses, descriptions, prices, and schedules.

You can also access course information via the Web at <http://www.rockwellautomation.com/training>

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