ControlLogix®/Studio 5000™

Studio 5000™ Logix Designer Level 2: ControlLogix® Maintenance and Troubleshooting Course Description

COURSE AGENDA

Day 1
- *Optional Locating: ControlLogix System Components*
- Connecting a Computer to a Network
- Interpreting Project Organization and Execution
- Locating and Editing Tag Values
- Interpreting Frequently Used Instructions

Day 2
- 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 Module Problems

Day 3
- Troubleshooting Analog I/O Module 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

Day 4
- Integrated Practice-Troubleshooting Basic Projects
- Editing Ladder Logic Online
- *Optional: Editing FBDs Online*
- Managing Project Files
- Documenting and Printing Project Components
- Troubleshooting Noise-Related Problems

COURSE NUMBER: CCP153

Course Purpose

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

This course adds to your skill set by introducing new tasks such as connecting to a network, interpreting project execution, editing ladder logic online, and more.

You will then be presented with a systematic strategy for diagnosing and troubleshooting a variety of common system errors:

- Controller, I/O, and other hardware problems
- Noise-related problems
- Software configuration problems

Who Should Attend

Individuals who need to maintain and troubleshoot a ControlLogix or other Logix5000 system should attend this course.

Prerequisites

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

- Knowledge of basic ladder logic instructions
- Completion of the *Studio 5000 Logix Designer Level 1: ControlLogix Systems Fundamentals* course (Course No. CCP146) or equivalent experience

AB *Allen-Bradley* · *Rockwell Software*   **Rockwell Automation**

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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
- *Studio 5000 Logix Designer and Logix5000 Procedures Guide:*
  - Provides the steps required to complete basic software tasks that are common to all Logix5000 hardware platforms
- *ControlLogix Troubleshooting Guide:*
  - Contains a systematic approach to diagnosing and troubleshooting common ControlLogix system problems

Hands-On Practice

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

You will also have the opportunity to combine and practice groups of key skills by completing two integrated practices during the course.

Hands-On Practice (Continued)

To complete the exercises, you will use a ControlLogix hardware workstation. Because the basic skills taught in the course apply to all Logix5000 platforms, you can then apply what you have learned to the specific platform that you use in your plant.

Next Learning Level

Once you have mastered the maintenance and troubleshooting skills covered in this course, you may be interested in one or more of the following courses:

- *Studio 5000 Logix Designer Level 3: Basic Ladder Logic Interpretation* (Course No. CCCL21)
- *DeviceNet and RSNetWorx Configuration and Troubleshooting* (Course No. CCP164)
- *ControlNet and RSNetWorx Maintenance and Troubleshooting* (Course No. CCP173)

Course Length

This is a four-day course.

Course Number

The course number is CCP153.

IACET CEUs

CEUs Awarded: 2.8

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