

# Logix5000™ Controllers

## RSLogix™ 5000 Level 3: ControlLogix® Maintenance and Troubleshooting

### COURSE AGENDA

#### Day 1

- Review: ControlLogix Components
- Connecting a Computer to a Network
- Updating Logix5000 Firmware
- Interpreting Project Organization and Execution
- Locating and Editing Tag Values
- Determining Local I/O Tags
- Interpreting Arrays and Tags of User-Defined Data Types

#### Day 2

- Editing Ladder Logic Online
- *Optional: Editing FBDs Online*
- Documenting and Printing Project Components
- Searching for Project Components
- Integrated Practice-Interpreting a Basic Project

#### Day 3

- Applying Preventative Maintenance and Troubleshooting Strategies
- Troubleshooting Controller Problems
- Interpreting GSV/SSV Instructions
- Forcing I/O and Toggling Bits
- Troubleshooting Digital I/O
- Troubleshooting Analog I/O

#### Day 4

- Troubleshooting Remote I/O Problems
- Troubleshooting Power Supply Problems
- Troubleshooting Noise-Related Problems
- Analyzing and Troubleshooting a System Using a Trend Chart
- Managing Project Files
- Integrated Practice-Troubleshooting Basic Projects



### 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:

- Completion of the *RSLogix 5000 Level 1: ControlLogix Systems Fundamentals* course (Course No. CCP146)
- Knowledge of basic ladder logic instructions (bit, timer, counter, etc.) through a course (Course No. CCCL21 or CCP151) or personal experience

LISTEN.  
THINK.  
SOLVE.®

### **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
- *RSLogix 5000 and Logix5000 Procedures Guide:*
  - Provides the steps required to complete basic RSLogix 5000 software tasks that are common to all Logix5000 hardware platforms
- *ControlLogix and RSLogix 5000 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. These exercises focus on the skills introduced in each lesson.

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

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 want to attend specific network maintenance training, such as:

- *DeviceNet and RSNetWorx Configuration and Troubleshooting (CCP164) course*
- *ControlNet and RSNetWorx Maintenance and Troubleshooting (CCP172) course*

### **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>

**[www.rockwellautomation.com](http://www.rockwellautomation.com)**

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