

# Logix5000™ Controllers

## RSLogix™ 5000 Level 1: ControlLogix® Fundamentals and Troubleshooting Course Description

### COURSE AGENDA

- *Optional: Understanding Control Systems*
- Locating ControlLogix Components
- Operating RSLogix 5000 Software
- *Optional: Selecting Industrial Networks*
- Connecting a Computer to a Communications Network
- Downloading and Going Online
- Updating Logix5000 Firmware
- Interpreting RSLogix 5000 Project Organization and Execution
- Locating and Editing Tag Values
- Determining Local I/O Tags
- Drafting Basic Ladder Logic
- Selecting Ladder Logic Instructions
- Editing Ladder Logic Online
- *Optional: Modifying Timer and Counter Instructions*
- Interpreting Arrays and Tags of User-Defined Data Types
- Documenting /Printing Components
- Searching for Project Components
- Integrated Practice - Interpreting a Basic Project
- Applying Preventative Maintenance and Troubleshooting Strategies
- Troubleshooting Controller Problems
- Interpreting GSV/SSV Instructions
- Forcing I/O and Toggling Bits
- Troubleshooting Digital I/O Problems
- Troubleshooting Analog I/O Problems
- Troubleshooting Remote I/O
- Troubleshooting Power Supplies
- Troubleshooting Noise Problems
- Analyzing and Troubleshooting a System Using a Trend Chart
- Managing Project Files
- Integrated Practice-Troubleshooting Basic Projects



### COURSE NUMBER: CCP299

#### *Course Purpose*

Upon completion of this course, you will 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
  - RSLogix 5000 software
- 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.®

### **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.

### **Prerequisites**

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

- Ability to perform basic Microsoft Windows® tasks
- Knowledge of basic ladder logic instructions (bit, timer, counter, etc.) through previous training and/or personal experience

### **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 Systems Glossary:*
  - Contains terms and definitions specific to Logix5000 systems
  - Defines key Logix5000 systems terminology
- *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 Controllers Troubleshooting Guide:*
  - Contains a systematic approach to diagnosing and troubleshooting common ControlLogix system problems

### **Student Material (Continued)**

- Logix5000 Controllers Programming Documentation Reference Guide:
  - Searchable, electronic resource
  - Contains frequently referenced technical documentation

### **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:

- 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:
  - The skills taught in this course can be applied to all Logix5000 platforms.
  - You can perform these tasks on the specific platform used in your plant.

### **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>

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

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