

# ControlLogix/Studio 5000

Studio 5000 Logix Designer Level 2:  
ControlLogix Maintenance  
and Troubleshooting



## 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

**LOCATION:** Kendall Electric, 1189  
Grants Mill Rd Birmingham, AL 35210

**DATE:** February 21-24, 2023 (4 days)

**COST:** \$2,780 per student

**CLASS ID:** 64053

## 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

## 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, completion of the Studio 5000 Logix Designer Level 1: ControlLogix System Fundamentals course (Course No. CCP146) or equivalent experience is required.

## STUDENT MATERIALS

To enhance and facilitate the students' learning experiences, the following materials are provided as part of the course package:

- Student Manual
  - Includes the key concepts, definitions, examples, and activities presented in this course
- Lab Book
  - Provides learning activities and hands-on practice. Solutions are included after each exercise for immediate feedback.
- 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. Exercises focus on the skills introduced in each lesson and are performed on an ABT-TDCLX3-B ControlLogix workstation.

Integrated practices combine and practice several key skills at once.

The basic skills taught in this course apply to all Logix5000 platforms; you can apply what you have learned to the specific platform used 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.

## IACET CEUS

Rockwell Automation is authorized by IACET to offer 2.8 CEUs for this program.



### TO REGISTER:





Please register online at [Kendall Electric](#) or contact Melissa Kincaid at 865.544.4496 or [melissa.kincaid@kendallelectric.com](mailto:melissa.kincaid@kendallelectric.com).

Lunch will be provided.

You can also access course information via the web at [Rockwell Automation](#).

Rockwell Automation is accredited by the International Association for Continuing Education and Training (IACET) and is authorized to issue the IACET CEU. [Click here](#) to view the Rockwell Automation Certificate of Accreditation.

To be respectful of the environment, Rockwell Automation is transitioning some of its training courses to a paperless format. Students are asked to complete downloads and bring personal devices to these classes. A full list of digital/paperless courses is currently available through your local distributor.

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