System Integrator

SI: Logix5000 Project Development and Basic Ladder Logic Programming

Rockwell Automation

Allen-Bradley by ROCKWELL AUTOMATION

Course Number

SI100

Course Purpose

This is a skill-building course that provides you with the resources and handson practice required to develop a Studio 5000 Logix Designer® project and program basic ladder logic instructions for any Logix5000™ controller.

You will have an opportunity to use the Logix Designer application to perform basic software tasks to meet the requirements of a given functional specification. In addition, you will be introduced to basic Logix Designer concepts and terminology.

COURSE AGENDA

DAY 1

- Locating Control System Components
- Creating and Modifying a Project
- Organizing Project
- Connecting a Computer to a Communication Network
- Downloading and Going Online
- Communicating with Local and Remote I/O Modules

DAY 2

- Updating Logix5000 Firmware
- Starting a Ladder Diagram
- Creating tags and Monitoring Data
- Entering Ladder Logic Components
- Organizing Arrays
- Creating UDTs
- Selecting Basic Ladder Logic Instructions
- Programming Timer Instructions
- Programming Counter Instructions

DAY 3

- Programming Move Instructions
- Programming Math Instructions
- Programming Compare Instructions
- Documenting and Searching Ladder Logic
- Configuring Produce/Consume Messaging
- Configuring Controllers to Share Date Over an EtherNet/IP Network
- Configuring a Message Instructions

DAY 4

- Creating a Periodic Task
- Creating an Event Task
- Developing an Add-On Instruction
- Testing a Ladder Diagram
- Handling a Major Fault
- Importing Logix Designer Components
- Optional: Understanding Control Systems
- Optional: Managing Logix Designer Project Files

WHO SHOULD ATTEND

This course is intended for System Integrator Programmers who have little or no working experience with Logix5000 controllers, and are responsible for programming Logix5000 controllers using the RSLogix 5000 application.

Curriculum Note: This course contains many of the lessons in courses CCP143, CCP146, and CCP151 – in a consolidated format. Do not take all 4 courses.

PREREQUISITES

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

- Perform basic Microsoft Windows tasks
- Read wiring diagrams

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 common to all Logix5000 hardware platforms

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 using a ControlLogix® workstation (Catalog Number ABT-TDCLX3-B). Exercises focus on the skills introduced in each lesson. The skills taught in this course can be applied to all Logix5000 platforms.

NEXT LEARNING LEVEL

After completing this training, you may be interested in one or more of the following courses:

- *Studio 5000 Logix Designer Level 4: Function Block Programming* (Course Number CCP152)
- *DeviceNet and RSNetWorx Configuration and Troubleshooting* (Course Number CCP164)
- *ControlNet and RSNetWorx Configuration and Troubleshooting* (Course Number 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

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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