ControlLogix/Studio 5000 Logix Designer

Advanced Logix 5000
Programmer Certificate

Rockwell Automation

AB QUALITY **Allen-Bradley**
by ROCKWELL AUTOMATION

Course Number

CCP251

Course Purpose

This course is for individuals who can quickly learn and apply Logix 5000™ concepts, terminology, hardware, and the Studio 5000 Logix Designer® programming environment.

You will learn about more advanced programming methods and instructions, project execution and optimization, controller project security and event logging, and tools available in the Studio 5000 Automation Engineering & Design Environment®.

This course prepares you for the Advanced Logix 5000 Programmer certificate exam, which is included in the course price.

Upon completion of this course, given a functional specification for a Logix 5000 application, you should be able to develop a highly optimized project to meet detailed specification requirements.

This course covers tasks common to the following hardware, which use the Logix 5000 control engine, or operating system:

- ControlLogix® controllers
- CompactLogix™ controllers

This course also provides optional introductory lessons and exercises for Integrated Architecture® Builder and Studio 5000 Architect® software which enables complete control system design and management.

COURSE AGENDA

DAY 1
- Managing Controller Memory and Add-On Profiles
- Leveraging Studio 5000 Logix Designer Tools
- Exporting, Importing, and Manipulating Tags
- Managing I/O

DAY 2
- Managing and Configuring I/O Alarms
- Programming Masked Moves
- Programming Array Arithmetic and Organization Instructions

DAY 3
- Programming Bit and Array Shift Instructions
- Optimizing Studio 5000 Logix Designer Organization and Execution
- Programming Sequencer Instructions

DAY 4
- Programming Advanced Messaging
- Managing Controller and Network Performance in a Studio 5000 Logix Designer Project
- Managing and Monitoring Controller Status and Information in a Studio 5000 Logix Designer Project

Additional Optional Topics
- Configuring an Integrated Architecture System Using Integrated Architecture Builder Software
- Designing a ControlLogix System Using Studio 5000 Architect Software

WHO SHOULD ATTEND

Ideal course attendees are those who:

- Are responsible for programming Logix 5000 controllers using the Studio 5000 Logix Designer application
- Have working experience with developing controller code
- Need to learn additional instructions, features, and functionality of Studio 5000 Logix Designer software

PREREQUISITES

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

- Completion of either of the following courses:
  - *Accelerated Logix 5000 Programmer Certificate Course Level 1* (Course Number CCP250)
  - *Studio 5000 Logix Designer Level 3: Project Development* (Course Number CCP143)
- Pursuit of a Logix 5000 Certificate for Programmers

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 step-by-step instructions for tasks that are common to all Logix 5000 hardware platforms. By following the procedures in this job aid, you can immediately apply what you learn to your own work.

CERTIFICATE ASSESSMENT

Access to the certificate assessment is valid for 90 days from end of class and will be provided by email.

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 with 5069 Compact I/O workstation (Catalog No. ABT-TDCLX4). Exercises focus on the skills introduced in each lesson.

NEXT LEARNING LEVEL

Once you have an understanding of the topics and skills covered in this course, you may want to attend specific Studio 5000 Logix Designer training such as:

- *Studio 5000 Logix Designer Level 4: Function Block Programming* (Course Number CCP152)
- *Studio 5000 Logix Designer Level 4: Structured Text/Sequential Function Chart Programming* (Course Number CCP154)

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**

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.

Connect with us.

rockwellautomation.com

expanding **human possibility**™