

Studio 5000 Logix Designer Level 3: Project Development

OEM: Rockwell Automation • Duration: 4 Days (32 hrs) • Code: CCP143

COURSE MODULES & TOPICS

Course Purpose

- Create a Studio 5000 Logix Designer® project file and configure 1756 I/O modules
- Configure arrays, user-defined data types, and more advanced ladder logic instructions
- Edit and verify ladder logic
- Configure a controller to produce and consume data
- Import and export project files and compare projects for differences
- Update controller and module firmware

Objectives

- Create and organize a project
- Create periodic and event tasks
- Develop an add-on instruction in ladder diagram
- Organize arrays
- Create a user-defined data type
- Import components
- Enter, edit, and verify ladder logic
- Configure a controller to produce and consume data
- Configure controllers to share data over EtherNet/IP™
- Communicate with a local 1756-I/O module and over an EtherNet/IP network
- Configure a message
- Allocate connections
- Retrieve and set controller status values with GSV/SSV instructions
- Program a BTD instruction
- Handle a major fault
- Manage project files
- Update firmware

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

- Knowledge of common controller terms and operation through experience or completion of the Studio 5000 Logix Designer Level 1: ControlLogix System Fundamentals (Course Number CCP146)

Student Materials

- 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.

Next Level Learning

- Studio 5000 Logix Designer Level 4: Function Block Programming course (CCP152)
- Studio 5000 Logix Designer Level 4: Kinetix 6500 (CIP) Programming course (CCN144)

Course Agenda

Day 1

- Create and Organize a Studio 5000 Logix Designer Project
- Create a Periodic Task in a Studio 5000 Logix Designer Project
- Communicate with a Local 1756-I/O Module
- Enter, Edit, and Verify Ladder Logic in a Studio 5000 Logix Designer Project
- Export and Import Studio 5000 Logix Designer Components

Day 2

- Create an Event Task in a Studio 5000 Logix Designer Project
- Organize Arrays in a Studio 5000 Logix Designer Project
- Create a User-Defined Data Type in a Studio 5000 Logix Designer Project
- Retrieve and Set Controller Status Values with Studio 5000 Logix Designer GSV and SSV Instructions
- Program a BTI Instruction in a Studio 5000 Logix Designer Project
- Develop an Add-On Instruction in a Studio 5000 Logix Designer Project

Day 3

- Configure a Logix 5000 Controller to Produce and Consume Data
- Configure a Logix 5000 Message
- Configure Controllers and Modules to Communicate and Share Data over an EtherNet/IP Network
- Allocate Connections in a Logix 5000 System
- Handle a Major Fault in a Logix 5000 Controller

Day 4

- Manage Studio 5000 Logix Designer Project Files
- Update Logix 5000 Firmware
- Integrated Practice: Develop a Studio 5000 Logix Designer Project