

# PLC-5 Programming & Maintenance

August 2025

## Course Overview

After completing this course, students will be able to program and navigate the RSLogix 5 software, understand and configure the hardware, and use available troubleshooting aids within the software. There are several labs and quizzes associated with this course. The course is done on equipment made available by the client.



## Course Objective

To provide the necessary information, resources, and hands-on activities needed to become familiar with the functionality of the PLC-5. The course focuses on hardware, installation, configuration, proper instruction, programming, and usage. Additionally, there are ample hands-on exercises that familiarize the student with the hardware and software.

## Who Should Attend

This course is recommended for maintenance and engineering personnel and those responsible for programming and maintaining this equipment.

## Course Length and Cost

Per Student Cost:	\$2000 USD
Course Length:	5 Days

## Client Expectations

This training is provided at a discount by using equipment provided by the client. Students are expected to attend the entire training session to receive their certificate. It includes a separate workstation, Flex IO Modules with DH/DH+ Communications Module, Flex IO ControlNet 2

Module, Flex IO Ethernet Module, PLC-5 Enhanced Controller, PLC-5 Ethernet Controller, PLC-5 ControlNet Controller, and software for each student. An additional station for the instructor. In addition, make the following available:

- Computer and necessary software, including: RSLogix 500, RSLinx
- Access to the Internet
- Dry-erase board for examples, assignments, etc.

## Provider Expectations

The contractor will provide the following:

- Student Workbook with exercises
- PLC-5 Instruction Set Reference (Digital)
- Select Procedure Guides
- Lab results can be provided if desired
- Certificate of Completion or Achievement
  - A completion certificate is provided to students who complete the entire class, but with no assessment
  - An achievement certificate is provided for those who complete the entire class and pass a written and programming assessment

## Course Agenda

Day 1:

- Safety
- PLC-5 Summary
- Numbering Systems
- Input and Output Devices
- Hardware Components
  - The Backplane
  - Controller
  - Input Modules
  - Output Modules
- Processor Faceplate

- Remote IO Adapter Module
- Network Communications
  - Scanner/Adapter Modes
  - Serial Communications
  - DH/DH+
  - ControlNet Communications
  - Ethernet Communications
- PLC-5 Memory Organization
- IO Addressing
- RS Linx Software
- RSLogix 500 Software Navigation
- Screen Properties
- Programming IO Instructions

### Day 2

- Review of the Memory Structure
- Going Online with the SLC-500
- Creating a New Project
- Understanding Bit Instructions
- Understanding Timer/Counter Instructions
- Programming Timer/Counter Instructions
- Making Online Edits

### Day 3

- Review of Bit/Timer/Counter Instructions
- Introducing Remote IO and Programming
- Forcing
- Understanding Compute/Math Instructions
- Programming Compute/Math Instructions
- Understanding Compare Instructions
- Programming Compare Instructions
- Comprehensive Programming Exercises

Day 4

- Review of Previous Instruction Set
- Understanding Program Control Instructions
- Programming Program Control Instructions
- Understanding Move/Logical Instructions
- Programming Move/Logical Instructions
- Comprehensive Programming Exercises

Day 5

- Comprehensive Programming Review
- Understanding Messaging
- Programming between Controllers
- Troubleshooting
- Final Assessment

## Adjustments

It may be necessary to adjust the course curriculum based on the students' understanding of the material. Every effort will be made to include as much information as possible.

Time permitting, troubleshooting will be incorporated into the program. Troubleshooting will be limited to software, edits, and hardware configurations unless the client provides faulty equipment to be used.

If you have questions about any part of the course, or a desire to modify the course curriculum, reach out to PO Automation to discuss. Price may vary depending on the extent of changes.