



## Curriculum Description

# PAC Automation Specialist

### Tuition Fee

Value: \$4,025

Tuition is at no cost to Channel Partners. See [“Training Class Cancellation Policy”](#) for details.

### Description

This training program provides advanced information needed to understand the ABB AC500 PLC, Automation Builder, their basic architecture, and use. It is intended for personnel who need the ability to support the AC500 PLC components via Automation Solutions applications. Training on components, languages, communications, programming, startup, and troubleshooting of simple applications. The student will understand and be able to implement the PLC in basic ABB Automation Solutions and troubleshoot to Level 2.

### Goals

- Understand and discuss the ABB PLC system
  - Languages, Architecture, Components, Communications, uses and advantages of the components,
  - How to select the right components
  - Understand the structure, functionality, and languages of Automation Builder Versions
  - 5 Different Programming languages
  - Variables, DUTs, Structures, Arrays, and trending, and much more
  - Basic understanding of Visualization options
  - Develop a simple working ABB PAC Automation Solution application.
  - Understanding of various troubleshooting techniques both in Automation Builder and with the AC500

### Type and Duration

This program is approximately 4.5 days of instructor led training.

### Student Profile

This Program is open for ABB authorized channel partners, OEM’s, technical support professionals, application engineers, technicians, and end-users who works with and sells the AC500 PLC.

### Training locations and scheduling

This Training Program is offered by our training facility in New Berlin, WI. Please visit the Drives & Automation Solutions Training Schedule for a list of upcoming classes.

### Prerequisites

- PAC Programming (Basic)
- All online courses, which are listed in the PAC Automation Specialist Program

### Learning Objectives

For successful completion of this program, students will:

- Complete all the online eLearning courses
- Attend the full Instructor Led Training
- Complete the Simulator Automation
- Pass the post-class exam (70% passing score)

During class, the student will:

- Learn various tips and tricks to work more efficiently
- Have the ability to troubleshoot errors codes, providing programming help.
- Understand the Programming Languages and how to best implement them:
  - Sequential Function Chart
  - Structured Text
  - Continuous Function Chart
- Develop multiple simple working ABB Automation Solution applications that includes:
  - Description and outline of the needed components
  - Plan and program Communications
  - Ability to find and use the ABB Application Notes and Modules
  - Tag, variables, and simple database layout
  - Commissioning and programming
  - System Testing
- Understand how to configure Automation Builder software to utilized Fieldbus control.
- Be able to use the PAC Automations Solutions information sources to find and provide the information needed to solve the customer application.

### Student Materials

All materials are downloadable from the Learning Management System or provided during the instructor led training.

## Agenda

Automation Builder Menus	Continuous Function Chart
Automation Builder IDE	Library and CFC Lab
Task Configuration	Update & SD Card
Variable Areas and Declaration	Project and Firmware Backup
Structured Text	Basics of Communication
ST Lab	AC500_V3_Visualization
Sequential Function Chart	AC500 V3 Visualization Lab
SFC Lab	Ethernet IP Lab
PRG, FB, FUN	PLC to 380 via Modbus Lab
DUTs	AC500 V3 to CP6607 HMI Lab
FB Lab	Network Variables
AC500 V3 Maint & Diag	AC500 Security
Alarm Manager	Online Resources
V3 Remanent Variables	Simulator Work
Maint and Diag Lab	
Std. Funct. Blocks and Library	

*Note: Students will have to download Automation Builder to complete this program. Standard or Premium License is required. The free Basic version will not be sufficient. ABB will not troubleshoot student owned PC's.*

