



## CURRICULUM DESCRIPTION

# Automation Authorized Customer Training

### Tuition Fee

\$4,025 per student

### Description

This training program provides the basic information needed to understand the ABB AC500 PLC and Automation Builder lines and their basic architecture and use. It is intended for personnel who need the ability to support the AC500 PLC components of basic Automation Solutions applications. Training on components, architecture, 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
  - 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
  - Programming languages
  - Variables and tags, basic understanding of recipes and trending
  - Basic understanding of Visualization options
  - Develop a simple working ABB PAC Automation Solution application
  - Tags, variables, and simple database layout
  - Have the ability to troubleshoot errors codes

### Type and Duration

This program is approximately 4.5 days of instructor-led training.

### Student Profile

This Program is intended for end-users who work with and program the AC500 PLC.

### Training locations and scheduling

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

### Prerequisites

PAC Programming (Basic)

### Learning Objectives

For successful completion of this program, students will:

- Develop a simple working ABB Automation Solution application 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
  - Security basics
  - System Testing
- Have the ability to troubleshoot errors codes, providing programming help
- Have access to, and competently use, all ABB Automation Systems Troubleshooting resources
- Understand how to configure Automation Builder software to utilized Fieldbus control ie. (ProfiNet, EtherNet/IP, Modbus/TCP...etc.)
- 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

<ul style="list-style-type: none"><li>• Automation Builder Menus</li><li>• Automation Builder IDE</li><li>• PNIO Controller SetUp</li><li>• PNIO Device Setup</li><li>• Task Configuration</li><li>• Variable Areas and Declaration</li><li>• Sequential Function Chart</li><li>• SFC Lab</li><li>• Structured Text</li><li>• ST Lab</li><li>• PRG, FB, FUN</li><li>• DUTs</li><li>• FB Lab</li><li>• AC500 V3 Maint &amp; Diag</li><li>• Alarm Manager</li><li>• V3 Remanent Variables</li></ul>	<ul style="list-style-type: none"><li>• Maint and Diag Lab</li><li>• Std. Funct. Blocks and Library</li><li>• Continuous Function Chart</li><li>• Library and CFC Lab</li><li>• Update &amp; SD Card</li><li>• Project and Firmware Backup</li><li>• Basics of Communication</li><li>• AC500_V3_Visualization</li><li>• AC500 V3 Visualization Lab</li><li>• Ethernet IP Lab</li><li>• AC500 ACSx80 Profinet Lab</li><li>• PLC to 380 via Modbus Lab</li><li>• AC500 V3 to CP6607 HMI Lab</li><li>• AC500 Security</li><li>• Automation Microsite Overview</li></ul>
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*Note: Students will have to download Automation Builder to complete this program. The free Basic version is sufficient. ABB will not troubleshoot student owned PC's.*

