ABB UNIVERSITY COURSE DESCRIPTION

F101
PLC AC500 V2 Basic Course

The course goal is to educate the participant in the use of Automation Builder Software suite to setup and program the ABB AC500 PLC. The participant can after successfully going through this course work on projects with the ABB AC500 platform as a programmable logic controller.

Course type and methods
Instructor guided course in an interactive classroom, discussions and practical exercises.

Half of the time is spent on practical implementation and exercises of the AC500 PLC System.

Student Profile
This course is made especially for system integrators, programmers, operational start-up- and service engineers.

Prerequisites
Participants need a basic knowledge of PLC systems and programming. All course literature is in English. Participants are required to bring their own laptop computers with Automation Builder Standard installed. ABB University will provide installation guides both for software and software registration before the course start.

Duration
The duration is 2 days

Course objectives
Upon completion of this course the participants will be able to:

- Understand the AC500 product family and utilize it to solve projects
- Create new projects with the AC500 hardware and IO family
- Configure the ProfiNet® control module and ProfiNet® communications interfaces
- Design, integrate and understand simple control logic in FBD, LD and ST in the IEC61131-3 programming language
- Understand and navigate the usage of internal libraries in the IEC61131-3 programming software
- Design and configure application diagrams by using a variety of IEC 61131-3 languages
- Configure the communications between the AC500 PLC and the CP600 control panels
- Understand the way to setup and optimize the system task(s) and distributed IO scan times
- Knowledge about the usage of the Automation Builder software to error check the hardware in the project

Main topics

- AC500 System architecture
- ABB Automation Builder software suite
- Project setup and project structure
- AC500 controller- and hardware- setup
- Decentralized control systems via ProfiNet®
- Standard program organizational units (functions, function blocks and programs)
- ABB AC500 system and drives library integration
- ABB AC500 drives library built-in visualization
- ABB Automation Builder as a hardware diagnostic
- Creating a project archive in Automation Builder