

## AB Function Block Programming In Logix/Studio 5000

### Course Description

This course is a skill-building programming course that provides you with an understanding of Studio 5000 Logix Designer® function block diagrams and terminology. This course also provides you with the resources and hands-on practice required to efficiently program a Logix5000™ controller using function block diagrams.

You will have an opportunity to use Logix Designer application and perform software tasks to meet the requirements of a given functional specification. In addition to using function blocks, you will perform parameter modifications to individual function block instructions, as well as create and develop function block diagram programs and routines. You will also gain experience with a variety of function block instructions, including PIDE and add-on instructions

### Target Audience:

Individuals who are responsible for developing, debugging, and programming Logix5000 controllers using the Logix Designer application with function block diagrams should attend this course. Also, individuals who use ActiveX controls in an operator interface, such as FactoryTalk® View ME software, should attend this course.

### Pre-requisites:

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

- Ability to perform basic Microsoft Windows tasks
- Understanding of basic measurement and control theory, including basic loop control
- Completion of the **Project Development** course (AB-3) or equivalent experience

### Course Duration:

**2 days, 7hours/day (from 9:00am to 4:00 pm).**

## Technical Contents:

- Creating a Function Block Diagram
- Programming Logical Function Block Instructions
- Programming Timer and Counter Function Block Instructions
- Programming Analog Function Block Instructions
- Programming Device Driver Function Block Instructions
- Selecting Timing Modes in a Function Block Instruction
- Programming a Totalizer Function Block Instruction
- Programming and Monitoring an RMPS (Ramp/Soak) Function Block Instruction
- Controlling Program Flow Using Function Block Instructions
- Programming a PID Loop Using Function Block Diagram
- Tuning a PID Loop
- Developing an Add-On Instruction in Function Block Diagram