

COURSE AGENDA

Day 1

- Deciding When to Use Fuzzy Logic
- Choosing a Fuzzy Control Scheme
- Identifying Input and Output Variables
- Identifying Input and Output Terms and Membership Parameters
- Writing Rules
- Choosing a Defuzzification Method
- Integrated Practice - Designing a Fuzzy System

Day 2

- Creating a FuzzyDesigner Project
- Creating Ports and Variables
- Entering Terms
- Entering Rules
- Chaining Rules
- Simulating a Fuzzy System's Execution
- Graphing Inputs and Outputs
- Creating and Importing a Fuzzy Add-On Instruction
- Monitoring and Changing the Fuzzy Add-On Instruction

Fuzzy Logic Design and Development



COURSE NUMBER: PRS012

Course Purpose

This course provides you with the skills to produce a fuzzy control system for a continuous process application. It introduces the range of options for fuzzy systems but focuses on using fuzzy logic to adjust the gains of a PID loop to meet specific control requirements.

Starting with a description of a process, you will decide if fuzzy logic is the best control method. You will design the fuzzy system, develop it in FuzzyDesigner software, and implement it in a Logix5000 controller. You will also use FuzzyDesigner's simulation, graphing, and online monitoring tools to validate the system against control requirements.

Who Should Attend

Individuals who need to design, develop, or implement advanced process control applications should attend this course.

Prerequisites

The following RSLogix 5000 software skills are required:

- Entering and editing logic
- Downloading and going online
- Monitoring and editing data

You can use this course to get the prerequisite skills:

- *RSLogix 5000 Level 1: ControlLogix Systems Fundamentals* (Course No. CCP146)

Student Materials

To enhance and facilitate your learning experience, the following materials are provided as part of the course package:

- *Student Manual*, which contains the key concepts, definitions, and examples presented in the course and includes the hands-on exercises.

Hands-On Practice

Throughout this course, you will have the opportunity to practice the skills you have learned through a variety of hands-on exercises.

Next Learning Level

Once you have mastered the skills in this course, you can expand your process knowledge by attending additional process related courses, such as:

- *PID Loop Development and Tuning* (Course No. PRS010)
- *RSLogix 5000 Level 4: Function Block Programming* (Course No. CCP152)

Course Length

This is a 2-day course.

Course Number

The course number is PRS012.

IACET CEUs

CEUs Awarded: 1.4



To Register

To register for this or any other Rockwell Automation training course, contact your local authorized Allen-Bradley Distributor or your local Sales/Support office for a complete listing of courses, descriptions, prices, and schedules.

You can also access course information via the Web at <http://www.rockwellautomation.com/training>

www.rockwellautomation.com

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