

COURSE DESCRIPTION

Process

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.

LISTEN. THINK. SOLVE.SM

**Rockwell
Automation**

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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

Power, Control and Information Solutions

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