CONTROLWAVE® DESIGNER ACCELERATED PROGRAMMING

COURSE #443

COURSE DESCRIPTION

Save time and money by attending this fast-paced, hands-on course for programming the ControlWave® product family using IEC-61131-3 standard software and Bristol®-supplied functions. This course provides you with the knowledge and skills required to define and control inputs and outputs of related real world applications, including communications and troubleshooting.

Students will generate and debug control strategy programs using several programming languages while learning the basics of ControlWave network communications, historical data storage, alarming, and hardware configurations, including MODBUS communications.

Ensuring customer confidence through knowledge of Bristol® and ControlWave® products and applications.

COURSE FEATURES

- Understand how IEC-61131-3, ControlWave Designer, and on-line utilities work
- Master skills necessary to create a program for ControlWave process controllers
- Learn the Bristol library of function blocks for measurement, calculations, process control, data storage, and alarming
- Understand OpenBSI Communications Software
- Master establishing ethernet/ IP communications using ControlWave Designer
- Learn to program polling and data transfers in BSAP and an I/O environment
- Understand how to define a hierarchical network of ControlWave controllers using NetView
- Understand the configuration of communication via other protocols such as MODBUS

WHO SHOULD ATTEND

- Personnel responsible for the establishing of communication interfaces to ControlWave Automation products

PREREQUISITES

- Participants must have a strong working knowledge of personal computers and Windows 2000/ XP or a later version
- Participants must have a strong working knowledge of their application/ process
- Participants should have some programming experience
- Participants should have completed “Creating a Simple Project”

REGISTRATION

To register for this training course, complete the enrollment application on our website: **www.EmersonProcess.com/Remote**.

For further information on custom classes or general training information contact:

Evelyn Bellefeuille
Watertown, CT
1-860-945-2343 or
1-800-395-5497 toll free within the United States

COURSE AGENDA

DAY 1

- Flash Memory Communication Configuration via LocalView
- ControlWave File Conventions
- I/O Configuration
- Program Organization Units (POU)
- Functions, Function Blocks, Programs
- Variables/ Types
- Tasks/ Program Instances
- Programming Languages
  - Ladder Logic
  - Function Block Diagram
  - Structured Text
- Class Project

DAY 2

- Debugging Techniques
- I/O Simulation
- Watch Window
- Creating Lists
- Programming for Audits/ Archives
- Programming for Alarms
- Establishing User Libraries
- Creating User Library of Function Blocks

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COURSE AGENDA CONTINUED

DAY 3

- Programming the ControlWave for Communications
- OpenBSI Utilities
- Understanding BSAP Communications
- BSAP Messaging
- Polling Philosophy
- Configuring Polling Time Messages
- System Variables Affecting Communications
- Communication Port Configurations
  - Master Port
  - Custom Port
  - I/P
- Establishing a Network Using OpenBSI NetView

DAY 4

- Communicating to Bristol Devices in a BSAP Protocol Network
- Transferring Signal Lists Between ControlWaves
- Using CLIENT and SERVER Function Blocks and Serial Connections
- Communication Port Configurations
- Serial and I/P Data Transfer
- ControlWave MODBUS Master
- ControlWave MODBUS Slave
- Configuring, Establishing, and Debugging Communications

DAY 5

- Troubleshooting
- Using DLM
- Advanced Programming Techniques
- Rev Control
- Port Attribute FB

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