

### COURSE DESCRIPTION

This introductory programming course provides students the necessary programming skills needed to program Network 3000 series controllers. Students will learn the concepts of ACCOL modules, tasks, and signals. They will apply these concepts to real world process control situations.



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

### COURSE FEATURES

- Understand how the ACCOL works
- Learn the relationship between ACCOL and the Network 3000 hardware
- Obtain the basic skills necessary to create an ACCOL program for Bristol Network 3000 controllers/RTU's/flow computers
- Learn how to use the ACCOL Tools (Workbench, OpenBSI/Dataview), both off-line and on-line
- Learn the basic ACCOL function modules for measurement, calculations, process control, data storage, and alarming

### WHO SHOULD ATTEND

- Personnel responsible for programming and debugging in ACCOL

### PREREQUISITES

- Participants must be familiar with Windows 2000/ XP or later versions
- Participants should have a working knowledge of their application/process

### ADVANCED TOPICS

- The following advanced topics are covered in other courses. Please attend the indicated advanced course once you have completed this course:
  - Networking 33XX products to one another, PC's, or devices using other protocols such as Modbus (course 412- ACCOL PartII)
  - Translating ACCOL programs to IEC 61131-3 Standards (course 451 - ACCOL Designer Translator)

### REGISTRATION

To register for this training course, complete the enrollment application on our website: [www.EmersonProcess.com/Remote](http://www.EmersonProcess.com/Remote).

For further information for classes in Watertown, Orlando, custom classes, or general training info:

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

### COURSE AGENDA

#### DAY 1

- ACCOL file structuring
- Hardware overview - DPC 3330/35, RIO 3331, RTU 3310/05
- Compatibility between hardware, firmware and software versions
- The general ACCOL concept: using software modules instead of hardware instruments
- ACCOL tasks
- Task rates and priorities
- ACCOL signals
- Signal naming conventions
- System signals
- Other ACCOL structures (signal lists, arrays, formats)
- Preliminary LocalView configuration

#### DAY 2

- Communications port definition menu
- Processing I/O board definition menu
- Memory configuration menu
- Building a task by creating modules
- Creating a load with memory setup, port setup, process I/O setup, and the ANIN, PID3TERM...
- Adding CALCULATOR module to normalize values and prevent reset windup on the PID3TERM



### COURSE AGENDA CONTINUED

#### DAY 3

- Simulating a batch system with DIGIN, TIMER, SEQUENCER, MUX, and DIGOUT modules
- Statistical data capturing with INTEGRATOR, AVERAGER, STORAGE
- Task “slippage”: #RCNT signals
- Task error counts: #ERRCT signals
- Task timing: the #RTTIME, #RATE, and #PRI signals
- Task error messages: #ERARRAY and the task error array

#### DAY 4

- Input/Output diagnostic messaging
- Accessing signals and arrays via DataView
- System checkout with OpenBSI
- Advanced task de-bugging using Debugger Mode

#### DAY 5

- Adjusting polling to remote I/O racks
- Using Task Controls to make module execution conditions
- Establishing a local interface to the ACCOL load via the KEYBOARD module
- On-line load changes (module rewiring, equation editing, list editing)