Course Overview

Course number: EXP-2001UOC  
Course length: 4.5 days

Need to plan and implement your Experion® Process Knowledge System (PKS) Unit Operation Controller (UOC)/virtual Unit Operation Controller (vUOC)?  
This course provides participants the ability to perform the following Experion PKS System tasks:

- Build control strategies in the Control Execution Environment that can be applied to the UOC/vUOC (CE900 IO, Ethernet IP IO)
- Plan the UOC/vUOC controllers including the selection of appropriate I/O, Redundancy, Topology and communications
- CE900IO and Ethernet IP IO configuration
- UOC/vUOC IO Reference configuration
- UOC/vUOC Control Module configuration. This includes configuring Data Acquisition, Regulatory Control and Logic
- Perform Checkpoint Save and Restore
- UOC/vUOC Sequential Control Module configuration. This includes the use of Steps and Transitions to implement process sequences
- The use of productivity tools like Engineering Data Builder

The course presents the basic concepts and strategies needed to develop guidelines for effective and consistent planning of the system. It includes extensive hands-on lab exercises where participants will build and configure a Control Execution Environment applicable to the UOC/vUOC.

Course Benefits

Efficient planning and implementation of your Experion PKS UOC/vUOC Controller

- Conceptual understanding of the UOC/vUOC controllers to enable optimum utilization
- Design and configure the UOC/vUOC controllers for optimum control

Course Delivery Options

- In-Center Instructor-Led Training
- On-Site Instructor-Led Training

Who Should Take This Course?

Experion PKS System Implementors

Experion System Engineering and configuration tasks can impact the following job roles. Other job roles performing these tasks could also participate.

- Experion System or Application Engineer responsible for configuring the controller, adding to or changing the controller configuration

Prerequisite/Skill Requirements

Prerequisite Course (s)

- None

Required Skills and/or Experience

- Some would benefit by taking the EXP-02
- Ability to navigate the Experion Station
- Ability to call up point details, group details, and custom displays
- Working knowledge of Windows Server 2016 R2 (64 Bit) and/or Windows 10 (64 Bit)

Desirable Skills and/or Experience

- Plant, process, and controls knowledge
- Experience of configuring DCS Controller
Course Topics

You will learn how to...

- Recognize the role of the major hardware and software components and learn how data flows through the UOC/vUOC controllers
- Plan the UOC/vUOC controllers
- Select appropriate components of the UOC/vUOC controllers including processors, I/O, Topology and communications
- Configure the UOC/vUOC controllers including:
  - Hardware
  - Converting a SPARE channel in an IOM to corresponding channel type and Configure IO references
  - Control Modules, which incorporate Data Acquisition using IO's Reference, Regulatory Control and Device Control Logic
  - Sequential Control Modules which are used to control process sequences, such as startup, shut down and batch operations
  - Checkpoint Save and Restore
  - UOC/vUOC performance calculation
- Use Productivity Tools
  - Engineering Data Builder
- Perform Database Search operations
  - Parameter search
  - Where Used search
  - Dangling / Missing Connections
  - Online Data Search

Additional Training

To increase your knowledge and skills, there are additional courses available from Automation College.