

Adv. Process Control: Fundamentals - Profit Controller Implementation



Course Overview

Course number: APC-4516

Course length: 4.5 days

Need to implement Profit[®] Controller for the first time, or provide on-going support for an APC System running in APP Nodes or in Experion Application Server (EAS) nodes?

This course provides a fundamental understanding of multivariable predictive control design and hands-on implementation using Profit Controller software.

After a brief introduction to basic control concepts, Profit Controller control concepts are presented. The workings of Profit Suite Engineering Studio (PSES) are presented to provide an in-depth understanding of the model identification tools and exercises are used extensively throughout the course to illustrate the different features of the software tools. Implementation on APP Node is covered extensively, as well as configuration to run on an EAS node.

Course Benefits

Implement a Profit Controller from A to Z

- Gain theoretical knowledge of multivariable control concepts
- Learn about Profit Controller differentiating features
- Gain the basic skills required to design a plant step test and identify dynamic models using PSES
- The ability to use the software tools to build and test the Profit Controller before commissioning
- How to install the controller and bring it on-line, and finally how to commission
- Gain the skills to implement new controllers and maintain existing APC
- Conduct operator training

Course Delivery Options

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

Who Should Take This Course?

Customers who implement APC using Profit Controller

Responsible for implementing new and/or supporting an existing Profit Controller implementation and Lead Operators

Prerequisite/Skill Requirements

Prerequisite Course (s)

- None

Required Skills and/or Experience

- Completion of basic Process Control courses

Desirable Skills and/or Experience

- Knowledge of process dynamics and some exposure to multivariable control
- Acquaintance or knowledge of linear models and linear algebra

Course Topics

- Design the most suitable controller structure, determine controller configuration, i.e. its MVs, CVs and DVs
- Design a pre-step plan in order to perform preliminary step testing with the objective of extracting gain and settling time information
- Design a rigorous step test plan and carry it out
- Identify dynamic models from raw data obtained from a step test
- Build the controller model, configuration and platform files needed for the on-line implementation of Profit Controller
- Simulate a controller off-line with the objective of performing preliminary tuning and stress testing before on-line commissioning
- Operate the LCN and PC resident user interfaces to interfaces to interact with the controller
- Install controller in the APP or E-APP Nodes
- Profit Suite Runtime Studio (PSRS) use for configuration to run on an Experion Application Server (EAS)
- Activate a controller, verify I/O and predictions and perform commissioning
- Establish the foundation for further training in the more advanced implementation topics of APC and optimization

Additional Training

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

For more information and registration, visit

www.honeywellprocess.com/en-US/training.