

# Advanced Process Control: Advanced - Profit® Controller and Profit® Optimizer Implementation



## Course Overview

**Course number:** APC-0001

**Course length:** 4.5 days

Have you implemented Profit Controller applications and would like to better understand the Profit Controller algorithm so that you can configure and tune your applications for better performance? Do you want to know how to design and implement a Profit Optimizer application?

This course is designed for experienced users of Profit Controller. This course emphasizes enhancing the user's understanding of how tuning parameter values directly affect the control and optimization solutions, through expanded explanations of algorithm details and interactive simulation labs.

## Course Benefits

- Strengthened understanding of algorithm details, such as prediction bias filtering, state estimation, variable priorities, URV deflation, blocking, minimum energy solution, optimization speed, and optimization coordination
- Understanding of the new and advanced features of Profit Controller and Profit Optimizer
- Improved ability to adjust tuning parameters for desired control and optimization responses

## Course Delivery Options

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

## Who Should Take this Course

### Process Control Engineers:

- Responsible for the design, implementation and commissioning of applications
- Responsible for application troubleshooting and maintenance
- Wanting to understand the technical details of the algorithms
- Making process optimization technology purchase decisions

## Prerequisite/ Skill Requirements

### Prerequisite Course(s)

- APC-4516

### Required Skills and/or Experience

- Control Engineering

### Desirable Skills and/or Experience

- Practical experience of designing, implementing and commissioning Profit Controller applications
- Understanding of linear algebra basics

## Course Topics

### You will learn how...

- Parameters such as the Performance Ratio, Feedforward-to-Feedback Performance Ratio, and Disturbance Estimation Tuning affect predictions
- To improve predictions with features such as “predict-back”, gain scheduling, and external disturbance variable (DV) predictions
- Manipulated variable (MV) soft limits, MV priorities, and CV priorities are implemented
- To improve your integrating CV tuning
- To apply nonlinear variable transformations
- The steady-state optimization solution is implemented by the Range Control Algorithm
- To tune for more aggressive control
- To design Profit Controller applications for coordination by Profit Optimizer
- To design and implement Profit Optimizer
- To tune Profit Optimizer

## 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](http://www.honeywellprocess.com/en-US/training).**