

COURSE NO. Z200V

Control Loop Tuning Methods On-Line Training

On-line course



About this course

This course utilizes the same courseware that was previously only available with an in-center classroom enrollment. It features a learning platform custom built by ABB University courseware developers, designed expressly to meet the needs of industrial automation users. A virtual machine with ABB controller simulation and system application software is provided for practice and completion of course labs. The in-center class requires a student to attend five days of training, plus travel time. By taking the on-line course, a student can remain on site, at home and save on travel costs.



24-7-365 Availability

Access courseware anytime, from anywhere, when it's most convenient for you.



Lifetime Access

This course and all your personal notes will remain available to you for life.



2 Weeks Virtual Machine

Access to cloud based virtual machine loaded with ABB controller and system software.

This course is for you if:

You are responsible for configuring and tuning control loops applied to temperatures, pressures, levels, flows, etc.

The main topics that will be covered in this course:

- Basic Instrumentation and actuators
- Instrumentation and actuator nonlinearities
- Process identification
- Feedback controllers
- Control tuning
- Dead time compensators
- Feed forward compensation
- Cascade control
- Cyclic reduction

Enroll at:

mylearning-americas.abb.com

Or contact us:

Tel: 1 800 HELP 365, option 2, option 4

Email: abbuniversity@us.abb.com

You'll walk away with

01

An understanding of instrumentation, actuators, control terminology, and cyclic reduction.

02

The ability to identify processes and deal with dead time.

03

Experience with feedback controllers, control tuning, tank level tuning, and cascade tuning.

Prerequisites

Students should have at least one year of experience working with industrial processes and associated controllers.

Your success team

The learning platform includes a chat feature and a user forum that allows you to send questions and comments to a learning facilitator and other students. Connect with fellow students to build a support network and collaborate with others.

Course Objectives

Upon completion of this course you will be able to:

- Understand nonlinearities associated with instrumentation and actuators
- Determine process modeling parameters including process gain, process time constant, and process dead time
- Select configured control modes (proportional, integral, derivative, etc.) based on process modeling parameters
- Choose, apply, and validate the optimal control tuning parameters for a given process
- Identify the need for and tune feedforward control applications
- Configuration and tuning of cascade control loops
- Evaluate the cyclical variation reduction capabilities of a given control loop

The key to maximum knowledge acquisition is hands-on practice.

ABB University on-line courses feature a virtual machine, hosted on ABB cloud servers. This virtual machine is loaded with the appropriate ABB controller simulation and system application software necessary to complete the on-line course labs, running on top of the Microsoft Windows operating system. This virtual machine is a safe way to practice knowledge learned from the online course without disruption to a working production system.