Basic Process Control Tutorial with APCL


Tutorial/CBT:

This interactive course explains the Fundamentals of Process Control and Dynamics using Voice, Video, Animation and Graphics.

Introduction
- Process Control
- Automatic Control
- Definitions
- Block Diagrams
- Open and Closed Loop System
- Feedback and Feedforward Control

Process Dynamics
- Introduction
- Input Changes
- Process Representation
- First Order System
- Higher Order System
- Process Identification
- Sensor and Control Valve Dynamics

PID Controller
- Introduction
- Proportional
- Integral
- PI Controller
- Derivative
- PID Controller
- Industrial PID Controller
- Direct and Reverse Action

On-Off Controller
- Introduction

Cascade Control
- Introduction
- Operations
- Initialization

Ratio Control
- Introduction

Tuning of Controllers
- Introduction
- Ultimate Method
- Reaction Curve Method
- Minimum Error Integral Methods
- Practical Considerations

Distributed Control System
- Introduction
- I/O Module
- Control Module
- Computer Module / Interface
- Operator Station

- Tutorial has a built-in Quiz and comes with a Learning Management System (LMS) called TutAdmin. The LMS allows an instructor to register trainees and monitor their performance and Quiz scores
- Tutorial is available as a Standalone or Web based application
- Available in English, Chinese, Danish, Dutch, French, German, Spanish and Swedish
Process Control Experiments:

- First Order Process Response
- Controlling First Order Process with PID Controller
- Second Order Process Response
- Controlling Second Order Process with PID Controller
- Controlling Tank Level with Single Loop Controller
- Controlling Tank Level with Cascade Controller

Simulation comes with a Learning Management System (LMS) called SimAdmin that allows an instructor to register trainees and monitor their performance.

Simulation is available as Standalone (Single or Dual Monitor) and Instructor-Trainee versions.