

Process Control Training & Skills Development Workshops

Learn How To: Tune PID Controllers, Optimize Plant Performance

JULY 25 - 26, 2017 » ES&E GREENSBORO

- Level 2:** Techniques for Applied Process Control (General)
- Location:** ES&E Greensboro | 1812 E. Wendover Ave, Greensboro, NC 27405
- Cost:** \$1,650.00
- Duration:** 2 days (16 hours) 8AM - 5PM
- Audience:** PLC/DCS Control System Technicians; Instrumentation Engineers; Process Engineers; Control Engineers; Plant Operators; and/or any plant staff who is responsible for maintaining critical process control investments
- Prerequisites:** Any plant staff responsible for regulatory control level performance. Basic control room experience whether as a technician, operator, or plant engineer is desired but not required.
- Materials:** LOOP-PRO TRAINER + Process Simulations

Course Objective:

This workshop covers proven best-practices for diagnosing process dynamics and manually tuning PID controllers. The workshop is hands-on and includes case studies of industrial problems and solutions. Course participants will leave with skills to achieve immediate impact to production control through loop optimization and process control strategy.

Earn Your Loop Tuning Certificate!



Supports All DCS/ PLC's

- | | |
|-----------|------------|
| Rockwell | ABB |
| Emerson | Schneider |
| Honeywell | Siemens |
| Yokogawa | NovaTech |
| | Mitsubishi |

DAY ONE

Fundamentals of Process Dynamics

- Demonstration:** Modeling Process Dynamics
Exercise: Exploring Dynamics of Gravity-Drained Tanks

Proportional Control

- Demonstration:** Implementation of P-Only Controllers
Exercise: P-Only Control of Tank Level

Integral Action and PI Control

- Exercise:** Hazards of Tuning PI Controllers by Trial and Error

Formal Approach to Controller Design

- Exercise:** PI Control of a Heat Exchanger

Derivative Model and PID Control

- Demonstration:** Modeling Process Dynamics
Exercise: Exploring Dynamics of Gravity-Drained Tanks

PID Control and Derivative Filter

- Demonstration:** PID with Filter Control of a Heat Exchanger
Exercise: PID with Filter Control of a Multi-Tank Process

DAY TWO

Systematic Approach to Real-World Processes

- Demonstration:** Simulation and Control of a Heat Exchanger
Exercise: Modeling and Simulating Control of a Single Loop Process

Cascade Control

- Demonstration:** Single Loop Control of a Jacketed Reactor
Exercise: Cascade Control of a Jacketed Reactor

Feed Forward Control

- Demonstration:** Feed Forward Control of an Ideal Process
Exercise: Feed Forward Control of a Jacketed Reactor

Dynamics of Non Self-Regulating Processes

- Demonstration:** Controlling a Non Self-Regulating (Integrating) Process
Exercise: Modeling and Simulating Control of a Pumped Tank Process

Register Today!

Space is limited. Call or email Susie at 336.574.4836 or srogers@ese-co.com