



Operators are the first point of attack in identifying and troubleshooting pipeline process control problems. However, they often lack the understanding of control loop performance issues to perform these tasks effectively. The one-day operator course is practical and results oriented. It is designed to give operators the basic skills and tools to identify and communicate process control problems. Approximately 25% of the course is devoted to a computer-based PLC-like process simulator, where the attendee practices the concepts presented during the lectures.

Pipeline Process Control Troubleshooting for Operators

Your technical resource for improving pipeline process control performance

Course Fees...

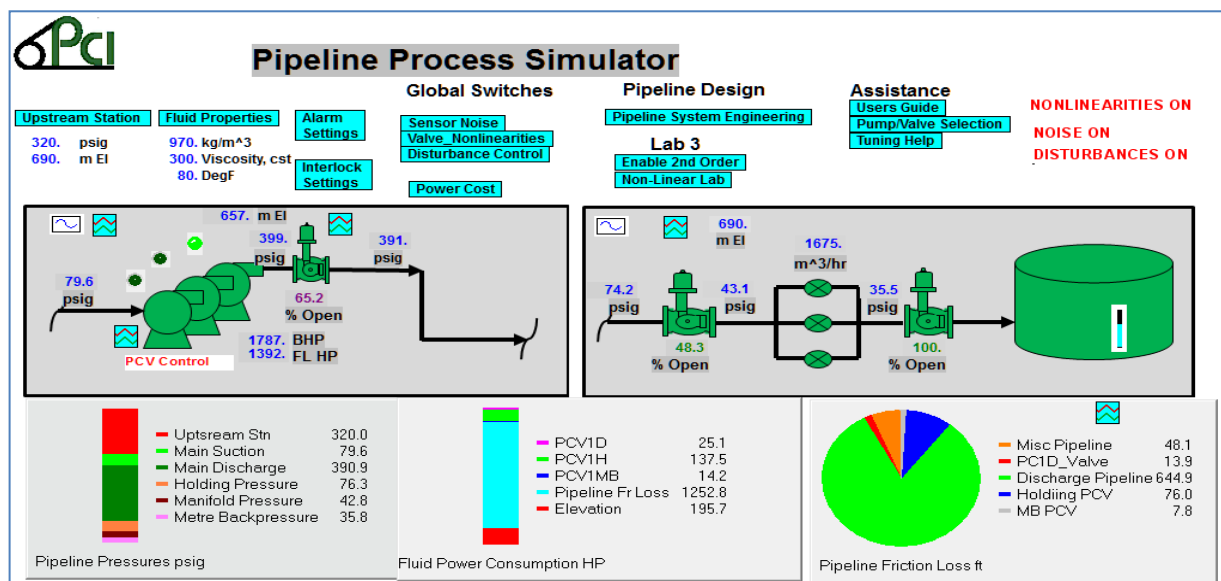
CDN	\$1000.00
USD	\$800.00

Topics covered include:

- Control loop fundamentals and terminology
- Function of the control loop
- Loop Dynamics
- Understanding Control Loop Performance
- Loop performance targets
- Analytical control loop troubleshooting procedures

(Canadian Taxes Included.) Fees include a full set of course notes.

The course is limited to 10 participants to provide individual attention and allow our expert instructors to address specific attendee issues.



Course Schedule

Lecture 1 8:00 – 8:30	Pipeline Control Overview
Lecture 2 8:30–9:30	Control Loop Basics Functioning of the feedback control loop Components of the control loop Controller Modes and Loop Terminology Loop dynamics – targets for pipeline loops Common loop problems
Lab/Demo 9:30-10:00	Process dynamics Measuring the process dynamics Impact of poor/unacceptable dynamics Impact of control valve problems
Lecture 3 10:00-11:00	Understanding control loop performance Setpoint and load response Performance targets for Pipeline control loops Impact of controller tuning on performance
Lab/Demo 11:00-12:00	Control Loop Performance Impact of tuning on control performance Impact of control valve problems
Lunch Break	
Lecture 4 1:00 – 2:00	Overview of Pipeline Control Strategies Pressure Control Viscosity Control Loop Interaction
Lecture 4 2:00–3:00	Troubleshooting control loop performance problems Analytical techniques to identify/correct loop problems
Lab/Demo 3:00 - 4:00	Troubleshooting Control Loop Problems Control Valve performance issues, poor tuning,
Wrap-Up and Discussion 4:00 – 4:30	

Course Location...

The course is being held at a conference facility. Attendees are responsible for arranging their own accommodations.

Accommodations...

For convenience, we recommend that registrants stay at the hotel course site.

About ProNamics...

ProNamics Control Inc. is based in Vancouver, BC. The company conducts process and control optimization surveys, prepares process simulations to establish best practices and provides a range of training courses related to process control optimization. Visit our web sites at www.pronamicscontrol.com for more information about our services.

About the Course ...

The course begins with a review of pipeline control applications and the functioning of the feedback control loop. The open loop bump test procedure is reviewed as a method to measure loop dynamics and diagnose loop performance problems such as poor sensor and valve performance. The impact of controller tuning on loop capability is explored. Analytical techniques to identify and correct process control problems is the final topic. Approximately 30% of the course is devoted to a computer-based lab, where the student demonstrates that they have understood the main concepts.

Who Should Attend...

The overall course objectives are to improve the operators understanding of the role and functioning of the control loop, and strengthen their ability to recognize poor loop performance, and diagnose / communicate process control problems to engineers and technicians.

The course is designed for process operators, shift supervisors, operations engineers.

Instructors Include...

Doug Nelson, P.Eng. has over 30 years of industrial process control experience. He has extensive experience in process control training of operators, E/I techs and process control engineers.

George Jablonsky, AScT is a recognized expert in optimizing and troubleshooting pipeline process control performance.