



Training Course	Process Control and Instrumentation
Course Language	English
Course Duration	Total Number of hours 40 Dates : February 17 – February 20 2019 (session 1) October 6 – October 9 2019 (session 2) Time 8:00 AM – 2:00 PM Venue : Hotel in West Bay
Course Objectives	<p>This course presents methods of calibration of various process variables measuring instruments and standards. Batch and continuous process control concepts, primary elements and process variables such as pressure, flow of fluids and control valves terminology and operation. Introduction to programmable logic controllers and input / output interface requirements with process variables are also introduced. Final control elements such as solenoids, electric motors, and valves and the controlling signalling also presented. This course is also an introduction to process control and control systems. Topics include process characteristics, Proportional-Integral-Derivative(PID) modes of control, On/Off control, PID tuning and batch/continuous control. Applications are presented in each case.</p>



Course Key Topic Area Includes:

Day 1:

08:00-9:00 Introduction to the course
09:00-09:40 Pressure and Level Instrumentation
09:40-10:00 Problem sets
10:00-10:20 Morning Break
10:20-11:30 Level Instrumentation
11:30-12:30 Lunch Break
12:30-14:00 Field Case Level Instrumentation Lab

Day 2:

08:00-09:50 Flow Instrumentation
09:50-10:00 Problem sets
10:00-10:20 Morning Break
10:20-11:30 Flow/ Temperature Instrumentation
11:30-12:30 Lunch Break
12:30-14:00 Field-Case 2 Temperature HART Instrumentation Lab

Day 3:

08:00-10:00 Control Valves
10:00-10:20 Morning Break
10:20-11:00 Process Control and Tuning
11:00-11:30 Lab exercises
11:30-12:30 Lunch Break
12:30-14:00 Field-Case 3 Process Control lab

Day 4:

08:00-10:00 Cascade and Ratio control
10:00-10:20 Morning Break
10:20-11:00 Cascade Control Lab exercise
11:30-12:30 Lunch Break
12:30-14:00 Field Case study Controller tuning recap

Course Content



Learning Outcomes	<p>At the end of the program the trainees will be able to:</p> <p>Upon completion of the course trainees will have a basic understanding of :</p> <ul style="list-style-type: none">• Explain the fundamentals of instrumentation and process control systems as used in industry• Understand the principles of operation and application pressure, flow, temperature and level measurement systems.• Understand the principles of operation and application of control valves• Design and install practical instrumentation systems• Identify and provide remedies for common process problems• Identify and tune various process control loop
Target Audience	<p>Engineers, operators and technicians that need to learn about and more about Instrumentation and process control loops.</p>
Course Material /Exams / Technology used/ Details Relevant to the course.	<p>Course Material: PPT Slides / Course book / Pre Test / Post test</p>



Instructor Details & Brief Instructor Bio	<p>Eng. Tom's vast knowledge of Electrical, Instrumentation, Maintenance, Planning, Scheduling, Start-Up and Commissioning (CSU), Root Cause Analysis (RCA), Reliability Centered Maintenance (RCM) experience came from over 55 years of practical knowledge in various sectors including Oil/Gas, Petrochemical, Electrical Utilities, Mining Military, Pulp/Paper, Marine Electronics, Agriculture and Maintenance Reliability. This experience allows Tom to provide extensive formal presentation and training seminars covering all of the above in both classroom and field environments.</p> <p>Asset Management and Reliability are technical, tactical and strategic exercises that consider human and organizational requirements in order to ensure sustainability. As a Senior Technical Advisor Tom champions efforts in this field to ensure that the approaches are total, sustainable and practical.</p> <p>CV Attached</p>
Course Fees	<p>QAR 16,000 per participant</p> <p>10 % corporate discount for 4 or more participants.</p> <p>Minimum number of participants to deliver the course : 6</p>
Contact Person	<p>Ms. Lijy Jose Senior Training Specialist Community Service and Continuing Education Center Qatar University Email : lijy@qu.edu.qa Phone : 44034025</p>