

TRAINING TITLE

INDUSTRIAL PROCESS MEASUREMENT AND CONTROL

Training Duration

5 day

Training Venue and Dates

Ref. No. IC161	Industrial Process Measurement and Control	5	23-27 June 2025	\$5,500	DUBAI, UAE
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In any of the 4 or 5-star hotels. The exact venue will be informed later.

Training Fees

- \$5,500 per participant for Public Training includes Materials/Handouts, tea/coffee breaks, refreshments & Lunch

Training Certificate

Define Management Consultants Certificate of course completion will be issued to all attendees.

TRAINING DESCRIPTION

This course focuses on the fundamentals of industrial process measurement and control. Participants will learn how to measure key process variables (such as temperature, pressure, flow, and level) and how to apply control strategies to optimize industrial processes for efficiency, safety, and reliability.

TRAINING OBJECTIVES

By the end of the course, participants will be able to understand

- Understand the basic principles of process measurement and control.
- Learn about different types of sensors and measurement devices.
- Understand control systems, including PID controllers and their tuning.
- Gain practical knowledge of process control strategies and automation.
- Learn how to troubleshoot and maintain measurement and control systems.

WHO SHOULD ATTEND?

- Process engineers and control engineers.
- Technicians and maintenance staff in manufacturing or industrial settings.
- Automation and instrumentation specialists.
- Anyone interested in learning about process measurement and control systems.

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TRAINING METHODOLOGY

A highly interactive combination of lectures and discussion sessions will be managed to maximize the amount and quality of information and knowledge transfer. The sessions will start by raising the most relevant questions and motivating everybody to find the right answers. You will also be encouraged to raise your own questions and to share in the development of the right answers using your own analysis and experiences. Tests of multiple-choice type will be made available on daily basis to examine the effectiveness of delivering the course.

Very useful Course Materials will be given.

- 30% Lectures
- 30% Workshops and work presentation
- 20% Group Work & Practical Exercises
- 20% Videos & General Discussions

COURSE PROGRAM

Day 1: Introduction to Industrial Process Measurement

- Overview of industrial processes and their importance
- Process variables: Temperature, pressure, flow, and level
- Types of sensors and measurement devices
- Calibration and accuracy of measurement instruments

Day 2: Process Control Fundamentals

- Basic principles of process control
- Types of control systems: Open-loop vs. closed-loop
- Control elements: Actuators, controllers, and sensors
- Introduction to PID (Proportional-Integral-Derivative) control

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Day 3: Advanced Control Systems and Strategies

- Control loops and feedback mechanisms
- Tuning PID controllers for optimal performance
- Feedforward control and cascade control systems
- Distributed Control Systems (DCS) and Programmable Logic Controllers (PLC)

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Day 4: Process Automation and Control Applications

- Applications of measurement and control in industries (oil & gas, chemicals, food processing, etc.)
- Automation systems: SCADA and HMI interfaces
- Control system design and implementation
- Troubleshooting common process control issues

Day 5: Maintenance, Troubleshooting, and Optimization

- Routine maintenance of measurement and control devices
- Identifying and diagnosing faults in measurement and control systems
- Optimizing control loops for process efficiency

NOTE:

Pre-& Post Tests will be conducted.

Case Studies, Group Exercises, Group Discussions, Last Day reviews, and assessments will be carried out.

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