

## CONTROL AND SHUTDOWN VALVES - MAINTENANCE & TROUBLESHOOTING

<b>Start Date:</b>	24/11/2026	<b>End Date:</b>	28/11/2026
<b>Categories:</b>	Engineering & Maintenance	<b>Venues:</b>	Barcelona
<b>Formats:</b>	In Person	<b>Instructors:</b>	Marinel Hercut

### OVERVIEW

This technical course covers the operating principles, preventive maintenance, and failure diagnostics for control and shutdown valves. Participants will gain a solid foundation in valve actuation, positioners, leakage prevention, and emergency shutdown readiness.

### OBJECTIVES

By the end of this course, participants will be able to:

- Understand control valve types, characteristics, and applications.
- Maintain and calibrate actuators, positioners, and trim components.
- Troubleshoot control and ESD valve malfunctions.
- Evaluate valve performance using test benches and diagnostics.
- Apply maintenance best practices to prevent failure and ensure safety.

### COURSE OUTLINE

1- Types of Control and Shutdown Valves 2- Valve Actuation Systems and Positioners 3- Maintenance Procedures and Calibration 4- Troubleshooting Techniques and Testing 5- Case-Based Diagnostics and Safety Compliance

### TARGET AUDIENCE

Instrument technicians, maintenance engineers, process engineers, and shutdown coordinators in oil & gas and utilities.

### METHODOLOGY

Field-based scenarios, calibration exercises, testing simulations, and team troubleshooting labs.

### CONCLUSION

Participants will be able to maintain, inspect, and troubleshoot control and shutdown valves to ensure efficient operations and emergency readiness.

## DAILY AGENDA

### Day 1: Valve Fundamentals and Types

Classify valves by design and function, including globe, ball, butterfly, and shutdown valves.

### Day 2: Actuators and Positioners

Understand pneumatic, hydraulic, and electric actuation and calibration of valve accessories.

### Day 3: Maintenance and Servicing

Apply maintenance cycles, packing adjustments, and trim replacement techniques.

### Day 4: Troubleshooting and Diagnostics

Analyze valve faults using test tools, assess loop performance, and correct alignment.

### Day 5: Safety, ESD Function and Best Practices

Review emergency shutdown requirements, failure modes, and safety compliance measures.

*For more information, please contact us:*

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