

Course Overview:

This course applies fundamental instrumentation and control engineering principles to oil and gas facilities design and operation, and is designed to accelerate the development of new Facilities Instrumentation and Control Engineers.

Course Objective:

- Operating principals and specification criteria for field measurement devices including level, pressure, temperature, and flow
- Final elements and actuators including control loops, control valves, shutdown valves, actuators, and transducers
- P&ID symbols and instrument tags, loop and logic diagrams, pitfalls and best practices, ISA symbology, and creation of instrument and I/O lists
- Signal types and wiring requirements for analog/discrete inputs and outputs as well as other signals such as thermocouple, RTD, pulse, and digital communications

Course Outline:

- Fundamentals of control signals and wiring
- Control system basics
- Field measurement devices
- Instrumentation and control strategies
- Installation and infrastructure requirements
- Drawings and documentation for IE&C
- Hazardous area installations

Who Should Attend:

Facilities Technicians as well as newly graduated Electrical, Controls and Instrument technicians with a need to improve basic understanding of instrumentation and control systems within oil, gas and power facilities.

Training Language:

EN / AR

Training Methodology:

- Presentation & Slides
- Audio Visual Aids
- Interactive Discussion
- Participatory Exercise
- Action Learning
- Class Activities
- Case Studies
- Workshops
- Simulation