

PIPELINES CONSTRUCTION, INSTALLATION & OPERATIONS (ONSHORE & OFFSHORE)

"Mastering Design, Engineering, and Execution for Safe and Efficient Pipeline Projects"

Schedule

Date	Venue	Fees (Face-to-Face)
11 - 15 May 2026	Dubai, UAE	USD 3495 per delegate

► **Available delivery methods:** Face-to-Face & Online Training, In-House Training

Introduction

Pipeline systems are the backbone of oil and gas transportation infrastructure. From the planning stage through construction and commissioning, both onshore and offshore pipelines demand rigorous engineering, safety compliance, and project management to ensure integrity and long-term performance.

This intensive course provides participants with comprehensive knowledge of pipeline design, construction, installation, and operations. It covers material selection, route planning, trenching, welding, hydrotesting, pigging, corrosion control, and regulatory standards. By combining technical foundations with practical examples, the course prepares professionals to manage pipeline projects across their lifecycle safely and effectively.

Objectives

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

- Understand the technical and regulatory requirements of pipeline projects
- Plan and execute onshore and offshore pipeline construction activities
- Evaluate materials, welding procedures, and corrosion protection systems
- Ensure safe installation, commissioning, and operation of pipelines
- Apply international codes and best practices to pipeline integrity management

Why Attend

- Gain a holistic understanding of pipeline construction across diverse environments
- Learn from real-world onshore and subsea project case studies
- Develop competencies in inspection, testing, and HSE practices
- Prepare for engineering, QA/QC, or supervisory roles on pipeline projects
- Ensure compliance with international standards and reduce operational risk

Target Audience

This program is designed for:

- Pipeline engineers and designers
- Project and construction managers
- Quality control, inspection, and commissioning personnel
- Maintenance and integrity engineers
- Operations and HSE professionals in pipeline-related projects

Individual Benefits

Key competencies that will be developed include:

- Pipeline route design and material specification
- Welding, NDT, and hydrotesting procedures
- Pipeline installation techniques for land and subsea systems
- Monitoring pipeline health and applying preventive maintenance
- Adhering to HSE, environmental, and industry regulations

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Improved project planning and construction efficiency
- Higher pipeline integrity and reduced downtime
- Compliance with safety and environmental standards
- Minimized risk of leaks, failures, and regulatory violations
- Better coordination across engineering, QA/QC, and operations teams

Instructional Methodology

The course follows a blended learning approach combining theory with practice:

- Strategy Briefings - Engineering standards, design codes, and technical frameworks
- Case Studies - International pipeline construction and installation projects
- Workshops - Route planning, installation techniques, and integrity assessments
- Peer Exchange - Field experiences and challenges in pipeline execution
- Tools - Construction checklists, weld procedure templates, HAZID registers

Course Outline

Training Hours: 7:30 AM - 3:30 PM Daily Format: 3-4 Learning Modules | Coffee breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 - 02:00

Day 1: Introduction and Design Principles

- Module 1: Pipeline Systems Overview (07:30 - 09:30) • Functions, types, components, and industry applications
- Module 2: Route Selection and Preliminary Design (09:45 - 11:15) • Topography, soil, marine conditions, permitting considerations
- Module 3: Material Selection and Line Pipe Specifications (11:30 - 01:00) • Steel grades, coatings, insulation, design pressure
- Module 4: Workshop - Pipeline Route Planning Exercise (02:00 - 03:30) • Map analysis and routing decision simulation

Day 2: Onshore Construction Techniques

- Module 1: Trenching, Bending, and Pipe Handling (07:30 - 09:30) • Right-of-way prep, stringing, bending machines
- Module 2: Welding and NDT Procedures (09:45 - 11:15) • WPS, PQR, inspection techniques (RT, UT, MPI)
- Module 3: Backfilling, Padding, and Lowering-In (11:30 - 01:00) • Construction sequencing and risk mitigation
- Module 4: Workshop - Interpreting Welding and NDT Reports (02:00 - 03:30) • Sample weld map and defect analysis

Day 3: Offshore Installation and Subsea Considerations

- Module 1: Marine Survey and Seabed Preparation (07:30 - 09:30) • ROVs, geotechnical investigations, trenching tools
- Module 2: Offshore Pipe-Laying Methods (09:45 - 11:15) • S-lay, J-lay, reel-lay, deepwater challenges
- Module 3: Subsea Tie-ins and Riser Installation (11:30 - 01:00) • Pig launchers, spool pieces, riser support
- Module 4: Workshop - Offshore Installation Planning (02:00 - 03:30) • Installation sequence and vessel requirements

Day 4: Commissioning, Integrity, and Operations

- Module 1: Hydrotesting and Pre-Commissioning (07:30 - 09:30) • Pressure testing, drying, pigging operations
- Module 2: Corrosion Control and Cathodic Protection (09:45 - 11:15) • CP systems, monitoring, internal coating selection
- Module 3: Pipeline Operations and Monitoring (11:30 - 01:00) • SCADA, flow assurance, surveillance tools
- Module 4: Workshop - Pigging and Integrity Assessment (02:00 - 03:30) • Smart pig data interpretation

Day 5: Safety, Regulations, and Risk Management

- Module 1: Pipeline Safety and HSE Compliance (07:30 - 09:30) • HAZOP, HAZID, permit-to-work, emergency response
- Module 2: Regulatory Frameworks and Industry Codes (09:45 - 11:15) • API, ASME B31.4/8, DNV, ISO standards
- Module 3: Risk Assessment and Incident Investigation (11:30 - 01:00) • Root cause analysis, risk registers
- Module 4: Final Workshop - Pipeline Project Case Study (02:00 - 03:30) • Plan, analyze, and present a pipeline execution strategy

Certification

Participants will receive a Certificate of Completion in Pipelines Construction, Installation & Operations (Onshore & Offshore), validating their expertise in pipeline design, field construction practices, safety, and integrity management.

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