

OFFSHORE & SUBSEA ENGINEERING - PIPELINES ENGINEERING

“Engineering Excellence Beneath the Surface: Designing, Installing & Maintaining Offshore Pipelines”

Schedule

Venue (InHouse)	Fees
At Your Organization Premises	Ask For The Quotation

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

Introduction

This comprehensive training equips engineers, project managers, and offshore professionals with the specialized knowledge and skills required to design, install, and maintain pipelines in offshore and subsea environments. Covering key technical and operational concepts—including design codes, route selection, seabed interaction, and integrity management—this course ensures participants can confidently contribute to offshore pipeline projects from concept to operation.

Objectives

Participants will learn to:

- Understand the unique challenges of offshore and subsea pipeline engineering
- Apply relevant design codes, standards, and installation techniques
- Evaluate hydrodynamic forces, route selection, and trenching techniques
- Implement integrity management, inspection, and maintenance strategies
- Identify failure risks and mitigation solutions in deepwater pipeline systems

Why Attend

- Master the full lifecycle of subsea pipeline systems
- Improve safety, efficiency, and reliability in offshore engineering projects
- Gain confidence in contributing to design reviews and technical decisions
- Stay compliant with global offshore pipeline regulations and standards

Target Audience

- Pipeline and offshore engineers
- Subsea project managers and supervisors
- Structural, mechanical, and civil engineers in energy sectors
- Field and inspection engineers
- Maintenance and integrity professionals
- Regulatory and HSE officers involved in pipeline operations

Individual Benefits

- Build technical competence in subsea and offshore pipeline systems
- Learn best practices and global codes (e.g., DNVGL, ASME, ISO)
- Understand real-world issues in corrosion, buckling, and repairs
- Enhance your problem-solving abilities in offshore contexts

Organizational Benefits

- Reduce risk of costly offshore pipeline failures
- Ensure regulatory compliance and improved project design review
- Strengthen asset life-cycle management and inspection programs
- Improve offshore team coordination across disciplines

Instructional Methodology

- Classroom-style training with 3D visuals and pipeline layout animations
- Real-world case studies and practical exercises
- Group problem-solving activities
- Video demonstrations of offshore installations
- Diagrams, failure analysis examples, and standards reviews

Course Outline

DETAILED 5-DAY COURSE OUTLINE (Customizable) Training Hours: 07:30 AM – 03:30 PM Daily Format: 3–4 Modules | Coffee breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 – 02:00

Day 1 – Fundamentals of Offshore & Subsea Pipeline Engineering

- Module 1 (07:30 – 09:30): Overview of Offshore Pipeline Systems
- Module 2 (09:45 – 11:15): Key Design Considerations (Depth, Pressure, Temperature)
- Module 3 (11:30 – 01:00): Codes & Standards (DNVGL, ISO, API, ASME)

Day 2 – Route Design, Hydrodynamics & Materials

- Module 4 (07:30 – 09:30): Route Selection, Surveying & Geotechnical Inputs
- Module 5 (09:45 – 11:15): Hydrodynamic Forces, Currents, and Scour Considerations
- Module 6 (11:30 – 01:00): Material Selection, Corrosion & Coating Systems

Day 3 – Installation Techniques & Equipment

- Module 7 (07:30 – 09:30): Trenching, Burial, and Rock Dumping Methods
- Module 8 (09:45 – 11:15): Installation Methods: S-lay, J-lay, Reel-lay
- Module 9 (11:30 – 01:00): Construction Equipment and Vessel Capabilities

Day 4 – Integrity, Inspection & Risk Management

- Module 10 (07:30 – 09:30): Integrity Management & Monitoring Techniques
- Module 11 (09:45 – 11:15): Pigging, Inspection Tools, and ROV Applications
- Module 12 (11:30 – 01:00): Risk Assessment and Mitigation Techniques

Day 5 – Failures, Repairs & Future Trends

- Module 13 (07:30 – 09:30): Pipeline Failure Modes and Lessons Learned
- Module 14 (09:45 – 11:15): Subsea Repair Technologies and Case Studies
- Module 15 (11:30 – 01:00): Digitalization, Remote Monitoring & Emerging Innovations

Certification

Upon successful completion, delegates will receive a Certificate of Completion in Offshore & Subsea Pipeline Engineering, validating their ability to support design, inspection, and maintenance of subsea pipeline systems in offshore environments.

Why Choose MAWA Events

- **Global Expertise:** More than 17 years of experience in professional training and consulting.
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In-House / Customized Training

Interested in running this course for your team?

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