MAWA EVENTS

Address: No. 857, Block A2. Leisure Commerce Square - No 9., 46150 Petaling Jaya, Selangor, Malaysia

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OFFSHORE & SUBSEA ENGINEERING – PIPELINES ENGINEERING

"Master the Design, Installation, and Maintenance of Offshore Pipelines for Safe and Reliable Operations"

Schedule

Date	Venue	Fees (Face-to-Face)
05 – 09 Jul 2026	Manama, Bahrain	USD 3495 per delegate
07 – 11 Sep 2026	Dubai, UAE	USD 3495 per delegate

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

Introduction

Offshore and subsea pipelines are critical lifelines for the global oil and gas industry, ensuring the safe transport of hydrocarbons from offshore production facilities to onshore terminals. Designing, installing, and maintaining these pipelines requires specialized knowledge to handle extreme environmental conditions, operational demands, and regulatory requirements.

This intensive 5-day course provides participants with a comprehensive understanding of offshore pipeline engineering, from design principles and material selection to installation techniques and integrity management. Through real-world case studies and hands-on exercises, participants will gain the technical expertise needed to optimize pipeline performance, minimize risks, and ensure long-term reliability.

Objectives

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

- Understand the fundamentals of offshore and subsea pipeline design
- Apply standards and best practices for pipeline engineering
- Identify key challenges in pipeline installation and integrity management
- Assess risks and implement effective mitigation strategies
- Optimize pipeline performance for safety, reliability, and cost-efficiency

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Why Attend

- Gain in-depth knowledge of offshore pipeline systems and operations
- Learn the latest technologies and innovations in subsea engineering
- Enhance your ability to manage pipeline projects and ensure compliance
- Reduce operational risks and improve asset performance
- Earn a professional certificate to validate your expertise

Target Audience

This program is designed for:

- Offshore and subsea engineers
- Pipeline design and installation engineers
- Project managers and operations supervisors
- Marine and structural engineers
- Technical staff involved in offshore projects and pipeline integrity

Individual Benefits

Key competencies that will be developed include:

- Advanced knowledge of offshore pipeline engineering principles
- Practical skills in design, analysis, and project execution
- Improved ability to manage pipeline integrity and risk
- Familiarity with international codes and industry standards
- Enhanced technical problem-solving and decision-making skills

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Stronger pipeline design and installation practices
- Reduced project risks and improved operational safety
- Increased cost-effectiveness through optimized engineering solutions
- Better alignment with regulatory and industry requirements
- Enhanced technical capacity and leadership within the organization

Instructional Methodology

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

- Strategy Briefings – Deep dive into offshore pipeline design, materials, and installation practices
- Case Studies – Real-world examples of offshore pipeline projects and lessons learned
- Workshops – Hands-on exercises in pipeline design, analysis, and risk assessment
- Peer Exchange – Group discussions on project challenges and solutions
- Tools – Checklists, design templates, and risk management frameworks for offshore pipelines

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Course Outline

Detailed 5-Day 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 to Offshore Pipeline Engineering Module 1: Overview of Offshore Pipeline Systems (07:30 – 09:30)

- Introduction to offshore pipeline networks and components
- Key functions and operational requirements
- Industry standards and regulatory framework

Module 2: Pipeline Design Principles (09:45 – 11:15)

- Design criteria and methodologies
- Material selection for subsea pipelines
- Hydrodynamic and geotechnical considerations

Module 3: Environmental and Operational Challenges (11:30 – 01:00)

- Deepwater and shallow-water environments
- Temperature, pressure, and corrosion factors
- Load conditions and pipeline responses

Day 2: Pipeline Construction and Installation Module 4: Installation Methods and Equipment (07:30 – 09:30)

- S-lay, J-lay, reel-lay, and tow methods
- Equipment and vessel requirements
- Onshore vs offshore construction techniques

Module 5: Welding, Inspection, and Quality Control (09:45 – 11:15)

- Welding techniques and procedures
- Non-destructive testing (NDT) methods
- Ensuring quality and compliance

Module 6: Trenching, Backfilling, and Stabilization (11:30 – 01:00)

- Seabed preparation and trenching techniques
- Rock dumping, mattresses, and other stabilization measures
- Protection against environmental and mechanical damage

Day 3: Pipeline Integrity and Risk Management Module 7: Pipeline Integrity Management (07:30 – 09:30)

- Monitoring systems and inspection technologies
- Assessing pipeline health and performance
- Developing maintenance and repair strategies

Module 8: Risk Assessment and Mitigation (09:45 – 11:15)

- Identifying hazards and failure modes
- Applying risk analysis tools
- Designing mitigation measures

Module 9: Emergency Response and Contingency Planning (11:30 – 01:00)

- Preparing for pipeline emergencies
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Response strategies and recovery plans

- Regulatory and stakeholder coordination

Day 4: Advanced Engineering and Innovations Module 10: Advanced Materials and Technologies (07:30 – 09:30)

- Flexible pipes, composite materials, and innovations
- Subsea processing and tiebacks
- Digitalization and smart pipeline technologies

Module 11: Case Studies in Offshore Pipelines (09:45 – 11:15)

- Successful project examples and key takeaways
- Lessons learned from pipeline failures
- Applying insights to future projects

Module 12: Cost Management and Project Economics (11:30 – 01:00)

- Budgeting and cost estimation
- Managing project timelines and resources
- Ensuring project profitability and success

Day 5: Integration and Course Wrap-Up Module 13: Group Exercise: Pipeline Project Simulation (07:30 – 09:30)

- Hands-on team simulation of a pipeline project
- Applying design, risk, and cost principles

Module 14: Presentation and Review (09:45 – 11:15)

- Group presentations and feedback
- Course summary and key takeaways

Module 15: Final Q&A and Closing Session (11:30 – 01:00)

- Open discussion and expert Q&A
- Certification ceremony and wrap-up

Certification

Participants will receive a **Certificate of Completion in Offshore & Subsea Pipelines Engineering**, validating their expertise in the design, installation, and management of offshore pipeline systems, with a focus on industry best practices and risk management strategies.

Why Choose MAWA Events

- **Global Expertise:** More than 17 years of experience in professional training and consulting.
- **Industry-Leading Faculty:** Courses delivered by seasoned professionals with hands-on experience.
- **Practical Insights:** Learn to turn theory into actionable strategies for real-world business impact.
- **Client-Focused Solutions:** Customized programs designed to achieve your organisation’s unique goals.

In-House / Customized Training Interested in running this course for your team? Please contact us:	TEL: **+601116373203**	EMAIL: **info@mawaevents.net**