

OIL & GAS FUNDAMENTALS: INNOVATIONS IN FPSO OPERATIONS

"Exploring Cutting-Edge Technologies and Operational Best Practices in FPSO Systems"

Schedule

Date	Venue	Fees (Face-to-Face)
17 - 21 Aug 2026	London - UK	USD 3495 per delegate

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

Introduction

Floating Production Storage and Offloading (FPSO) units are critical to offshore oil and gas production, combining production, storage, and offloading capabilities in a single vessel. This 5-day intensive course delves into the key technologies, processes, and innovations shaping FPSO operations today. Participants will explore the fundamentals of FPSO design, operation, and maintenance, and how new advancements are improving performance, efficiency, and safety.

The course also covers the impact of evolving regulations, safety protocols, and operational best practices, providing a thorough understanding of FPSO's role in modern offshore oil and gas fields. By the end of this training, participants will be equipped with practical knowledge and insights into the latest trends and innovations driving FPSO operations worldwide.

Objectives

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

- Understand the key components and systems involved in FPSO operations
- Learn about the latest innovations and technological advancements in FPSO design and operation
- Identify common challenges faced in FPSO operations and ways to mitigate risks
- Implement best practices to optimize FPSO performance and safety
- Understand regulatory compliance and environmental considerations in FPSO operations
- Develop strategies for effective maintenance, troubleshooting, and operational efficiency of FPSOs

Why Attend

- Gain a comprehensive understanding of FPSO systems and how they integrate into offshore oil and gas operations
- Learn about the latest innovations, technologies, and strategies enhancing FPSO performance
- Improve your ability to manage and maintain FPSOs, ensuring operational safety and efficiency
- Stay ahead of the curve in an evolving industry with insights into regulatory and environmental compliance
- Network with industry professionals and gain exposure to best practices in FPSO operations

Target Audience

This program is designed for:

- Engineers, technicians, and managers working in FPSO operations and maintenance
- Offshore oil and gas professionals involved in the planning, design, or management of FPSO systems
- Project managers and operations managers overseeing offshore facilities and floating production units
- Safety and compliance officers working in offshore production facilities
- Professionals looking to deepen their understanding of FPSO technologies and innovations

Individual Benefits

Key competencies that will be developed include:

- Expertise in FPSO operations, technologies, and systems
- Ability to optimize FPSO performance, reduce downtime, and improve safety
- Knowledge of troubleshooting and maintenance best practices for FPSO systems
- Familiarity with the latest industry innovations and advancements in FPSO technology
- Improved understanding of regulatory and environmental considerations in FPSO operations

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Improved efficiency and safety in FPSO operations, leading to enhanced performance
- The ability to implement innovative solutions that increase FPSO reliability and uptime
- Expertise in navigating regulatory and environmental challenges specific to FPSOs
- Enhanced problem-solving skills in managing complex offshore production units
- A deeper understanding of the latest FPSO technologies and their application in offshore oil and gas operations

Instructional Methodology

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

- Strategy Briefings - Overview of FPSO technologies, innovations, and their impact on offshore oil and gas operations
- Case Studies - Real-world examples of FPSO operations and the challenges faced in offshore environments
- Workshops - Practical exercises focused on FPSO design, maintenance, and troubleshooting strategies
- Peer Exchange - Group discussions on the latest innovations, industry trends, and operational best practices
- Tools - Templates, checklists, and guidelines for effective FPSO operations and maintenance management

MAWA EVENTS

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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 FPSO Systems and Operations

- Module 1: Overview of FPSO Technologies (07:30 – 09:30)
- Introduction to FPSO systems and their role in offshore oil and gas production
- Key components and systems of FPSO units (production, storage, offloading)
- Types of FPSOs and their applications in different offshore environments
- Module 2: FPSO Design and Engineering Fundamentals (09:45 – 11:15)
- Basic design principles and criteria for FPSOs
- Integration of FPSO systems with offshore facilities and subsea infrastructure
- Challenges in FPSO design, stability, and structural integrity
- Module 3: FPSO Operations and Performance Optimization (11:30 – 01:00)
- Operational processes and performance metrics for FPSOs
- Innovations in FPSO performance and efficiency improvements
- Strategies for minimizing downtime and optimizing production

Day 2: Safety, Maintenance, and Risk Management in FPSO Operations

- Module 4: Safety Considerations and Risk Management (07:30 – 09:30)
- Key safety protocols and industry regulations governing FPSO operations
- Risk management strategies to ensure safe operations offshore
- Environmental concerns and compliance in FPSO operations
- Module 5: FPSO Maintenance and Troubleshooting (09:45 – 11:15)
- Maintenance strategies and best practices for FPSOs
- Common challenges in FPSO maintenance and how to address them
- Troubleshooting techniques for FPSO systems and equipment
- Module 6: Emergency Response and Incident Management (11:30 – 01:00)
- Developing effective emergency response plans for FPSO operations
- Case studies on FPSO incident management and crisis response
- Communication and coordination during offshore emergencies

Day 3: Innovations in FPSO Technology and Industry Trends

- Module 7: Technological Advancements in FPSO Design (07:30 – 09:30)
- The latest innovations in FPSO design, including digitalization and automation
- Use of advanced monitoring systems for real-time performance analysis
- Emerging technologies such as remote monitoring, drone inspections, and AI in FPSO operations
- Module 8: Sustainable Practices and Environmental Considerations (09:45 – 11:15)
- Advances in environmentally sustainable FPSO operations
- Minimizing environmental impacts through design and operational practices
- Industry best practices for reducing emissions and waste
- Module 9: Future Trends and Challenges in FPSO Operations (11:30 – 01:00)
- Exploration of the future of FPSO systems in a changing energy landscape
- The role of FPSOs in renewable energy and decommissioning projects
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Industry challenges and opportunities in the evolving FPSO market

Day 4: Case Studies, Workshops, and Practical Exercises

- Module 10: Real-World FPSO Case Studies (07:30 – 09:30)
- Detailed analysis of real FPSO operations, including successes and challenges
- Lessons learned from case studies and practical examples from industry leaders
- Group discussion and problem-solving based on case study scenarios
- Module 11: FPSO Design and Maintenance Workshop (09:45 – 11:15)
- Hands-on workshop focused on FPSO design, operational planning, and maintenance strategies
- Simulation of FPSO performance optimization and troubleshooting activities
- Peer feedback and sharing of experiences
- Module 12: Implementing Innovations in FPSO Operations (11:30 – 01:00)
- Applying the latest innovations in FPSO operations through practical exercises
- Identifying opportunities for technology integration and performance improvement
- Developing action plans for implementing innovative strategies

Day 5: Regulatory Compliance, Certification, and Wrap-Up

- Module 13: Regulatory Compliance and Environmental Standards (07:30 – 09:30)
- Overview of FPSO regulatory requirements and compliance standards
- Environmental impact assessments and sustainable operations
- Managing legal and regulatory risks in FPSO operations
- Module 14: FPSO Certification and Best Practices (09:45 – 11:15)
- Certification processes for FPSOs and the role of certification bodies
- Industry best practices for FPSO operation and maintenance
- Developing and maintaining FPSO certifications for continued safety and compliance
- Module 15: Final Review and Certification (11:30 – 01:00)
- Summary of key takeaways from the course
- Final Q&A session to clarify any remaining queries
- Certification distribution and course closure

Certification

Participants will receive a Certificate of Completion in FPSO Operations and Innovations, validating their expertise in FPSO systems, technologies, and best practices for offshore oil and gas operations.

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