

WELLHEAD DESIGN AND ENGINEERING

“Ensuring Safe, Efficient, and Reliable Wellhead Systems”

Schedule

Date	Venue	Fees (Face-to-Face)
06 - 10 Sep 2026	Doha, Qatar	USD 3495 per delegate

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

Introduction

The Wellhead Design and Engineering course delivers comprehensive knowledge of the design, construction, and maintenance of wellhead systems, essential for oil and gas operations. Participants will explore key engineering principles, safety considerations, pressure control mechanisms, and the latest technologies shaping wellhead performance.

With a focus on both theoretical foundations and practical applications, this course equips engineers and technical personnel with the tools needed to ensure wellhead integrity, operational efficiency, and regulatory compliance.

Objectives

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

- Understand the fundamental design principles of wellhead systems.
- Identify critical components and functions within wellhead assemblies.
- Apply best practices for installation, operation, and maintenance.
- Evaluate pressure control, sealing systems, and load-bearing structures.
- Address well integrity issues and ensure adherence to safety standards.

Why Attend

- Gain in-depth knowledge of wellhead engineering tailored to field applications.
- Learn from industry experts with real-world case studies.
- Enhance safety awareness and reduce operational risks.
- Build technical confidence to troubleshoot and optimize wellhead systems.
- Stay updated with evolving industry technologies and standards.

Target Audience

This program is designed for:

- Wellhead and completion engineers.
- Drilling and production engineers.
- Field supervisors and maintenance personnel.
- Oil and gas project engineers and technical staff.
- Anyone involved in the design, installation, or inspection of wellhead systems.

Individual Benefits

Key competencies that will be developed include:

- Strong understanding of wellhead system design and engineering principles.
- Improved ability to assess system performance and integrity.
- Practical knowledge of wellhead installation, pressure control, and maintenance.
- Enhanced problem-solving skills for technical and operational challenges.
- Increased confidence in ensuring safe and efficient wellhead operations.

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Improved wellhead system reliability and reduced downtime.
- Enhanced safety compliance and reduced incident rates.
- Greater operational efficiency through optimized system design.
- Better maintenance strategies that extend equipment life.
- Stronger alignment with industry best practices and regulatory standards.

Instructional Methodology

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

- Strategy Briefings - In-depth coverage of wellhead design principles and system components.
- Case Studies - Real-world examples highlighting design successes and challenges.
- Workshops - Practical exercises on wellhead calculations, pressure testing, and troubleshooting.
- Peer Exchange - Group discussions on lessons learned from field operations.
- Tools - Engineering templates, inspection checklists, and reference materials.

MAWA EVENTS

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

Phone: +601116373203 | **Email:** info@mawaevents.net



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 Wellhead Systems

- Module 1: Overview of Wellhead Design (07:30 – 09:30)
 - Purpose and functions of wellhead systems.
 - Types of wellheads: surface and subsea.
 - Industry standards and regulatory requirements.
- Module 2: Components and Materials (09:30 – 11:30)
 - Casing heads, tubing heads, and hangers.
 - Sealing systems and gaskets.
 - Material selection and corrosion considerations.

Day 2: Load Analysis and Pressure Control

- Module 3: Load-Bearing and Stress Analysis (07:30 – 09:30)
 - Axial, radial, and bending loads.
 - Structural integrity of wellhead equipment.
 - Load calculations and design margins.
- Module 4: Pressure Control Mechanisms (09:30 – 11:30)
 - Well control principles and equipment.
 - Blowout preventers (BOPs) and pressure testing.
 - Seal integrity and leak prevention.

Day 3: Installation and Maintenance Practices

- Module 5: Installation Procedures (07:30 – 09:30)
 - Step-by-step installation workflow.
 - Equipment handling and alignment.
 - Safety considerations during installation.
- Module 6: Maintenance and Inspection (09:30 – 11:30)
 - Routine inspection protocols.
 - Identifying wear, corrosion, and fatigue.
 - Repair strategies and replacement planning.

Day 4: Advanced Topics and Technologies

- Module 7: Subsea Wellhead Systems (07:30 – 09:30)
 - Subsea architecture and special considerations.
 - Remote monitoring and control technologies.
 - Challenges and innovations in deepwater operations.
- Module 8: Emerging Technologies (09:30 – 11:30)
 - Smart wellhead systems and digital integration.
 - Advanced materials and sealing solutions.
 - Trends in wellhead design optimization.

Day 5: Case Studies and Action Planning

- Module 9: Real-World Case Studies (07:30 – 09:30)
 -

Analysis of wellhead failures and lessons learned.

- Best practices in challenging environments.
- Group discussion on field experiences.
- Module 10: Final Workshop and Action Planning (09:30 – 11:30)
- Applying course knowledge to participant projects.
- Developing individual action plans.
- Sharing strategies for ongoing learning and improvement.

Certification

Participants will receive a Certificate of Completion in Wellhead Design and Engineering, validating their advanced knowledge in the design, installation, and maintenance of wellhead systems in oil and gas operations.

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.

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

© Material published by MAWA Events shown here is copyrighted. All rights reserved. Any unauthorized copying, distribution, use, dissemination, downloading, storing (in any medium), transmission, reproduction or reliance in whole or any part of this course outline is prohibited and will constitute an infringement of copyright.