MAWA EVENTS

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

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

ASSET TECHNICAL PROCESS SAFETY ENGINEERING & MANAGEMENT

"Strengthening Safety, Reliability, and Compliance in Asset Operations"

Schedule

Date	Venue	Fees (Face-to-Face)
13 – 17 Jul 2026	London, UK	USD 3495 per delegate

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

Introduction

This advanced training program delivers essential knowledge on technical process safety, focusing on engineering practices and management strategies that safeguard people, assets, and the environment. Participants will explore international safety standards, hazard analysis techniques, and risk management approaches critical to minimizing operational risks and achieving regulatory compliance.

By blending safety engineering theory with real-world applications, the course equips participants to identify potential hazards, develop robust safety management systems, and implement best practices for continuous safety improvement in asset-intensive industries.

Objectives

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

- Understand key principles of process safety engineering and management
- Apply hazard identification and risk assessment techniques (HAZOP, LOPA, Bowtie)
- Develop and implement effective safety management systems (SMS)
- Integrate safety performance indicators into operational decision-making
- Strengthen organizational safety culture and improve compliance

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Why Attend

- Gain advanced insights into technical process safety and asset risk management
- Learn to apply globally recognized safety standards (e.g., API, IEC, OSHA, ISO)
- Improve operational safety, reliability, and sustainability
- Minimize risks of accidents, incidents, and regulatory non-compliance
- Work with expert trainers and apply learnings through interactive workshops

Target Audience

This program is designed for:

- Process safety engineers and safety managers
- Asset integrity and reliability professionals
- Risk managers and HSE (Health, Safety & Environment) specialists
- Plant operations managers and supervisors
- Engineers involved in design, maintenance, and operation of hazardous processes

Individual Benefits

Key competencies that will be developed include:

- Advanced understanding of process safety engineering frameworks
- Practical application of hazard identification and risk assessment tools
- Ability to develop, implement, and audit safety management systems
- Enhanced safety leadership and communication skills
- Confidence in improving safety performance across the organization

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Improved safety performance and risk control measures
- Stronger compliance with industry safety regulations and standards
- Reduced incidents, near-misses, and operational disruptions
- Enhanced asset integrity and reliability through safer operations
- Strengthened organizational safety culture and continuous improvement

Instructional Methodology

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

- Strategy Briefings – Deep dive into process safety principles, regulatory frameworks, and safety management systems
- Case Studies – Analysis of real-world safety incidents, investigations, and lessons learned
- Workshops – Hands-on exercises on HAZOP, LOPA, risk assessment, and safety planning
- Peer Exchange – Group discussions on shared challenges, strategies, and improvements in safety practices
- Tools – Templates for hazard analysis, safety audits, performance metrics, and improvement plans

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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: Fundamentals of Process Safety Engineering

- Module 1: Introduction to Process Safety (07:30 – 09:30)
- Principles of process safety and importance in asset operations
- Key global standards and regulatory frameworks
- Overview of process safety management systems (SMS)
- Module 2: Hazard Identification Techniques (09:45 – 11:15)
- HAZID (Hazard Identification) methodology
- Understanding potential hazards in process operations
- Case examples of hazard identification failures
- Module 3: Risk Assessment Methods (11:30 – 01:00)
- Introduction to HAZOP (Hazard and Operability Study)
- Layers of Protection Analysis (LOPA) basics
- Bowtie analysis for visualizing risk pathways

Day 2: Safety Systems and Engineering Controls

- Module 4: Safety Instrumented Systems (07:30 – 09:30)
- Design and function of safety instrumented systems (SIS)
- IEC 61511 and SIL (Safety Integrity Level) concepts
- Integration of SIS into overall safety strategies
- Module 5: Mechanical Integrity and Asset Reliability (09:45 – 11:15)
- Managing mechanical integrity and equipment reliability
- Inspection, testing, and preventive maintenance practices
- Role of asset integrity in process safety
- Module 6: Fire and Explosion Protection (11:30 – 01:00)
- Combustible materials and ignition sources
- Fire protection systems and explosion prevention
- Emergency response planning and mitigation

Day 3: Safety Management Systems and Culture

- Module 7: Developing Effective SMS (07:30 – 09:30)
- Elements of a successful safety management system
- Safety leadership and management commitment
- Continuous improvement in safety practices
- Module 8: Safety Auditing and Performance Measurement (09:45 – 11:15)
- Conducting safety audits and inspections
- Defining and tracking safety KPIs
- Using data for safety performance improvement
- Module 9: Building a Strong Safety Culture (11:30 – 01:00)
- Engaging teams and fostering safety ownership
- Communication strategies for safety awareness
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Lessons from organizations with exemplary safety cultures

Day 4: Advanced Tools and Emerging Trends

- Module 10: Human Factors and Error Reduction (07:30 – 09:30)
- Understanding human error in process safety
- Designing systems to minimize human error
- Behavioral safety and training approaches
- Module 11: Digitalization and Safety (09:45 – 11:15)
- Role of digital technologies in improving safety
- Predictive analytics and real-time monitoring
- Future trends in process safety management
- Module 12: Emergency Planning and Crisis Management (11:30 – 01:00)
- Developing and testing emergency response plans
- Crisis communication strategies
- Learning from past major incidents

Day 5: Integration and Implementation Planning

- Module 13: Integrating Safety Across the Asset Lifecycle (07:30 – 09:30)
- Incorporating safety into design, construction, and operations
- Lifecycle risk management strategies
- Collaborative safety planning across teams
- Module 14: Group Workshop: Process Safety Improvement Plan (09:45 – 11:15)
- Group project to develop a tailored safety improvement plan
- Presenting findings and receiving feedback
- Applying workshop insights to real-world operations
- Module 15: Review, Action Planning, and Closing (11:30 – 01:00)
- Recap of key takeaways and tools
- Developing individual action plans
- Final Q&A and course wrap-up

Certification

Participants will receive a Certificate of Completion in Asset Technical Process Safety Engineering & Management, validating their expertise in applying advanced process safety principles, conducting hazard and risk assessments, and implementing robust safety management practices aligned with global standards.

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**

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