

MINING SAFETY & ENGINEERING

"Enhancing safety performance and engineering controls in modern mining operations."

Schedule

Date	Venue	Fees
21 - 22 Oct 2026	Online	USD 700 per delegate

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

Introduction

Mining is one of the most hazardous industrial sectors, involving complex engineering systems, heavy machinery, and high-risk working environments. Ensuring safety in mining operations requires a strong understanding of engineering controls, hazard identification, risk management, and regulatory compliance. Effective integration of safety principles into mining engineering practices is essential to prevent accidents, protect workers, and maintain operational continuity.

This 2-day intensive online training provides participants with a comprehensive understanding of mining safety principles and engineering best practices. The course covers key hazards, safety management systems, engineering controls, and incident prevention strategies applicable to both surface and underground mining operations. Participants will gain practical insights to enhance safety performance while supporting efficient and compliant mining operations.

Objectives

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

- Identify major hazards associated with surface and underground mining.
- Understand mining engineering principles related to safety and risk control.
- Apply hazard identification and risk assessment techniques in mining operations.
- Implement effective engineering and administrative safety controls.
- Support compliance with mining safety regulations and standards.

Why Attend

- Improve understanding of mining-specific safety risks and controls.
- Enhance integration of safety into mining engineering and operations.
- Reduce workplace accidents and operational disruptions.
- Strengthen compliance with mining safety regulations.
- Build professional competence in mining safety management.

Target Audience

This program is designed for:

- Health, safety, and security professionals in mining operations.
- Mining engineers and technical staff.
- Supervisors, foremen, and site managers.
- Maintenance and operations personnel.
- Safety representatives and compliance officers.

Individual Benefits

Key competencies that will be developed include:

- Ability to identify and control mining-related hazards.
- Understanding of safety-focused mining engineering practices.
- Improved risk assessment and incident prevention skills.
- Enhanced awareness of regulatory and compliance requirements.
- Increased confidence in managing safety within mining environments.

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Improved safety performance and reduced accident rates.
- Stronger integration of safety into mining engineering and operations.
- Enhanced compliance with mining laws and standards.
- Reduced downtime and costs associated with incidents.
- Improved safety culture across mining sites.

Instructional Methodology

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

- Strategy Briefings - Mining safety principles, engineering controls, and regulations.
- Case Studies - Real-world mining incidents and lessons learned.
- Workshops - Hazard identification and risk assessment exercises.
- Peer Exchange - Discussions on safety challenges in mining operations.
- Tools - Risk assessment templates, checklists, and safety planning guides.

Course Outline

Detailed 2-Day Course Outline

Training Hours: 9:00 AM – 4:00 PM Daily Format: 3–4 Learning Modules | Coffee breaks as scheduled | Lunch Break: 01:00 – 02:00

Day 1: Fundamentals of Mining Safety and Engineering

Module 1: Introduction to Mining Safety (09:00 – 10:30)

- Overview of mining operations and hazards
- Safety statistics and common causes of mining accidents
- Roles and responsibilities in mining safety

Module 2: Mining Engineering Principles and Safety (10:45 – 12:15)

- Basic mining engineering concepts
- Ground control, excavation stability, and design considerations
- Equipment selection and safe operation

Module 3: Hazard Identification and Risk Assessment (01:00 – 02:30)

- Hazard identification techniques in mining
- Risk assessment methodologies
- Control measures and hierarchy of controls

Module 4: Regulatory Compliance and Safety Management Systems (02:45 – 04:00)

- Overview of mining safety regulations and standards
- Safety management systems in mining
- Day 1 review and discussion

Day 2: Advanced Safety Controls and Incident Prevention

Module 5: Engineering Controls and Safe Work Practices (09:00 – 10:30)

- Ventilation, dust, noise, and vibration control
- Machinery guarding and automation safety
- Electrical and mechanical safety

Module 6: Emergency Preparedness and Incident Response (10:45 – 12:15)

- Emergency planning in mining operations
- Fire, explosion, and collapse response
- Rescue operations and drills

Module 7: Human Factors and Safety Culture (01:00 – 02:30)

- Behavioral safety and human error
- Training, supervision, and competency management
- Promoting a strong safety culture

Module 8: Incident Investigation and Continuous Improvement (02:45 – 04:00)

- Accident and near-miss investigation techniques
- Root cause analysis
- Continuous improvement strategies and course wrap-up

Certification

Participants will receive a Certificate of Completion in Mining Safety & Engineering, validating their knowledge of mining safety principles, engineering controls, and best practices for safe and compliant mining operations.

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