**MAWA EVENTS**

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

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# RAW MATERIAL QUARRYING

*""Mastering Safe, Efficient, and Sustainable Quarry Operations for Construction and Industrial Use""*

## Schedule

| Date | Venue | Fees (Face-to-Face) |
|---|---|---|
| 11 – 15 Oct 2026 | Manama, Bahrain | USD 3495 per delegate |

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

## Introduction

Raw material quarrying plays a critical role in supplying the foundational materials—such as limestone, clay, aggregates, and gypsum—needed for construction, cement, and industrial production. As global demand rises, quarry operations must meet increasing expectations for efficiency, safety, regulatory compliance, and environmental responsibility.

This 5-day intensive course delivers an end-to-end understanding of modern quarrying practices, from geological assessment and site planning to blasting, extraction, material handling, and rehabilitation. It provides both technical insight and management strategies to optimize productivity while maintaining the highest safety and sustainability standards.

## Objectives

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

- Understand the lifecycle of quarry operations from exploration to closure
- Apply best practices in site planning, drilling, blasting, and material extraction
- Manage operational risks and ensure compliance with HSE standards
- Evaluate equipment choices, material flow, and cost-efficiency
- Implement rehabilitation and environmental mitigation strategies

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## Why Attend

- Enhance your understanding of quarrying methods and operational planning
- Reduce costs and downtime through better blasting and material handling techniques
- Ensure compliance with environmental, health, and safety regulations
- Improve coordination across geology, operations, and maintenance teams
- Support sustainable and socially responsible quarry development

## Target Audience

This program is designed for:

- Quarry Managers and Site Supervisors
- Mine and Geology Engineers
- Environmental and HSE Professionals
- Project Managers and Plant Engineers in cement, aggregates, and raw materials
- Operations and Maintenance Leaders in quarry-based industries

## Individual Benefits

Key competencies that will be developed include:

- Geological assessment and resource estimation
- Blasting design and safety management
- Excavation, loading, and haulage planning
- Environmental and dust control techniques
- Planning for site rehabilitation and closure

## Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Improved operational efficiency and output from quarry sites
- Enhanced worker safety and regulatory compliance
- Reduction in waste, overbreak, and environmental violations
- Better planning for equipment utilization and maintenance
- Stronger community relations and environmental stewardship

## Instructional Methodology

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

- Strategy Briefings – Overview of quarry operations, industry benchmarks, and planning tools
- Case Studies – Global examples of successful quarry management and sustainability
- Workshops – Blasting design, load/haul calculations, and environmental planning
- Peer Exchange – Group discussion on local regulatory and operational challenges
- Tools – Checklists for site audits, blasting logs, production monitoring templates

## Course Outline

DETAILED 5-DAY COURSE OUTLINE

**Training Hours:** 07:30 AM – 03:30 PM **Daily Format:** 3–4 Learning Modules | Coffee breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 – 02:00

**Day 1: Introduction to Quarrying and Site Evaluation**

- Module 1: Overview of Quarrying Operations (07:30 – 09:30) • Types of raw materials and quarrying methods • The quarry lifecycle: from exploration to rehabilitation
- Module 2: Geological Investigation and Resource Estimation (09:45 – 11:15) • Geological mapping, core drilling, and sampling • Reserve calculation and deposit modeling
- Module 3: Quarry Planning and Regulatory Framework (11:30 – 01:00) • Zoning, permitting, and site layout considerations • Local laws and environmental compliance
- Module 4: Workshop – Resource Evaluation (02:00 – 03:30) • Basic reserve estimation and quarry layout planning

**Day 2: Blasting, Excavation, and Equipment**

- Module 5: Drilling and Blasting Fundamentals (07:30 – 09:30) • Explosives selection, blast design, and timing • Safety protocols and environmental impact control
- Module 6: Loading and Haulage Operations (09:45 – 11:15) • Equipment selection, productivity metrics, and fuel optimization • Loading cycles, dump site design, and haul road planning
- Module 7: Equipment Maintenance and Availability (11:30 – 01:00) • Preventive maintenance for crushers, excavators, and trucks • Minimizing downtime and spare parts planning
- Module 8: Workshop – Blast Design Review (02:00 – 03:30) • Case-based design of a surface blast pattern

**Day 3: Processing, Material Quality, and Stockpiling**

- Module 9: Material Processing and Crushing Operations (07:30 – 09:30) • Primary, secondary, and tertiary crushing setups • Screening, washing, and product grading
- Module 10: Stockpile Management and Material Flow (09:45 – 11:15) • Stockpile design, dust control, and loadout efficiency • Contamination prevention and inventory control
- Module 11: Quality Control and Testing Procedures (11:30 – 01:00) • Sieve analysis, moisture content, and aggregate strength tests • Reporting and corrective actions
- Module 12: Workshop – QC Scenario Analysis (02:00 – 03:30) • Resolving a real-world material rejection case

**Day 4: Safety, Risk, and Environmental Control**

- Module 13: HSE Management in Quarrying (07:30 – 09:30) • Hazard identification, risk assessment, and PPE policies • Training, reporting, and emergency preparedness
- Module 14: Environmental Management and Monitoring (09:45 – 11:15) • Air and water quality, noise control, and biodiversity protection • Dust suppression systems and waste management
- Module 15: Community Relations and Legal Compliance (11:30 – 01:00) • Stakeholder engagement, grievance redress, and inspections • Handling environmental audits and citations
- Module 16: Workshop – Quarry Risk Register (02:00 – 03:30) • Developing a risk matrix and safety improvement plan

**Day 5: Rehabilitation, Cost Control, and Final Integration**

- Module 17: Quarry Rehabilitation and Closure Planning (07:30 – 09:30) • Soil stabilization, revegetation, and post-use planning • Regulatory expectations and sustainability reporting
- Module 18: Cost and Productivity Optimization (09:45 – 11:15) • Cost drivers in drilling, hauling, crushing, and compliance • Benchmarking KPIs and reducing fuel/energy waste
- Module 19: Course Review and Action Planning (11:30 – 01:00) • Personal and site-level improvements
- Module 20: Feedback, Certification and Wrap-Up (02:00 – 03:30) • Final Q&A, individual goals, and certificate distribution

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## Certification

Participants will receive a Certificate of Completion in Raw Material Quarrying, demonstrating their expertise in managing safe, productive, and environmentally responsible quarry operations from planning to closure.

## 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.

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