MAWA EVENTS

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

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

INSPECTION AND MAINTENANCE OF CONCRETE STRUCTURES

"Preserve Structural Integrity – Inspect, Repair, and Maintain with Confidence."

Schedule

Venue (InHouse)	Fees
At Your Organization Premises	Ask For The Quotation

► **Available delivery methods:** In-House Training

Introduction

This course provides an in-depth understanding of inspection techniques and maintenance strategies for concrete structures. Participants will learn how to identify common forms of deterioration, assess structural health, and apply effective maintenance and repair methods to ensure safety, durability, and compliance with standards.

Objectives

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

- Recognize deterioration mechanisms in concrete structures
- Perform visual and technical inspections
- Analyze structural defects and determine causes
- Plan and execute appropriate maintenance and repair actions
- Enhance the longevity and performance of concrete assets

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Why Attend

- Improve the reliability and safety of existing concrete structures
- Reduce long-term repair costs through early detection and intervention
- Comply with international standards such as ACI, BS, and EN
- Learn hands-on techniques from expert instructors

Target Audience

- Civil and Structural Engineers
- Maintenance and Facility Engineers
- QA/QC Inspectors
- Construction Supervisors
- Government/Consultancy Professionals involved in infrastructure

Individual Benefits

- Master advanced inspection tools and diagnostic techniques
- Learn to interpret signs of structural fatigue and damage
- Gain career advancement opportunities in inspection and maintenance roles

Organizational Benefits

- Enhance asset management practices
- Extend the lifespan of valuable infrastructure
- Reduce unexpected downtime and repair costs
- Improve safety and reduce liability

Instructional Methodology

- Multimedia-enhanced lectures
- Hands-on demonstrations and exercises
- Case study analysis of real-world failures
- Group work and discussions
- Final assessment and solution planning

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Course Outline

DETAILED 5-DAY COURSE OUTLINE (Customizable) Training Hours: 07:30 AM – 03:30 PM Daily Format: 3–4 Modules | Coffee breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 – 02:00

Day 1: Fundamentals of Concrete Deterioration

- Material properties and structural behavior
- Environmental and chemical influences
- Common defects: cracks, spalling, carbonation, corrosion

Day 2: Inspection Techniques & Condition Assessment

- Visual inspection methods
- Non-destructive testing (NDT) tools
- Condition surveys and structural health monitoring (SHM)
- Documentation and reporting

Day 3: Damage Diagnosis and Risk Evaluation

- Root cause analysis of defects
- Structural load analysis and stress mapping
- Risk-based prioritization of maintenance

Day 4: Repair Materials and Maintenance Techniques

- Crack injection, patch repair, corrosion protection
- Use of polymers, coatings, and fiber-reinforced composites
- Cathodic protection and waterproofing

Day 5: Maintenance Planning & Long-Term Protection

- Scheduled maintenance programs
- Life cycle cost analysis
- Case studies: bridges, buildings, industrial structures
- Workshop: Develop a Maintenance Plan for a real structure

Certification

Participants will receive a Certificate of Completion titled: “Inspection and Maintenance of Concrete Structures”

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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