

STRUCTURAL CONDITION ASSESSMENT OF EXISTING STRUCTURES TRAINING

“Evaluating Structural Integrity for Safety, Reliability, and Longevity.”

Schedule

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

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

Introduction

This specialized training provides participants with the knowledge and practical tools required to assess the condition, safety, and serviceability of existing structures. The course covers inspection techniques, structural evaluation methods, material testing, and data interpretation to support maintenance, rehabilitation, or retrofit decisions. It bridges the gap between theoretical design assumptions and real-world performance, enabling engineers and inspectors to make informed judgments about structural health and durability.

Objectives

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

- Understand the purpose and process of structural condition assessment.
- Identify common types of structural deterioration and damage.
- Plan and execute visual inspections and non-destructive testing (NDT).
- Interpret assessment data to evaluate structural integrity.
- Develop maintenance, repair, and strengthening strategies.
- Prepare professional assessment reports and recommendations.

Why Attend

This course equips professionals with essential diagnostic and analytical skills to evaluate and maintain the safety of existing structures. Participants will gain hands-on insights into assessment procedures, testing techniques, and repair planning—critical for extending service life and ensuring structural reliability.

Target Audience

- Structural and Civil Engineers
- Building Inspectors and Maintenance Engineers
- Project Managers and Site Supervisors
- Consultants and Asset Managers
- Contractors involved in rehabilitation and retrofitting
- Government and Municipal Infrastructure Authorities

Individual Benefits

- Improved ability to identify structural deficiencies and deterioration mechanisms.
- Enhanced understanding of inspection, testing, and evaluation techniques.
- Capability to make data-driven repair and retrofit decisions.
- Strengthened technical and reporting skills for professional advancement.

Organizational Benefits

- Enhanced structural safety and reliability of existing assets.
- Reduced maintenance costs through proactive assessment programs.
- Improved compliance with safety and building regulations.
- Better planning and resource allocation for rehabilitation projects.
- Strengthened technical credibility and risk management practices.

Instructional Methodology

This course employs a combination of:

- Technical lectures and visual presentations
- Case studies of real-world structural failures and repairs
- Demonstrations of non-destructive testing (NDT) equipment and methods
- Group discussions and problem-solving exercises
- Practical sessions focused on inspection planning and reporting

Course Outline

Day 1: Introduction to Structural Condition Assessment

- Objectives, importance, and scope of assessment
- Structural behavior under service and deteriorating conditions
- Codes and guidelines for existing structures

Day 2: Inspection and Data Collection

- Planning and executing field inspections
- Visual inspection techniques and damage mapping
- Use of drones, sensors, and digital tools for inspection

Day 3: Non-Destructive and Semi-Destructive Testing Methods

- Overview of NDT techniques (rebound hammer, UPV, half-cell potential, core sampling, etc.)
- Testing for corrosion, cracks, and material degradation
- Interpretation of test data and reliability considerations

Day 4: Evaluation, Analysis, and Reporting

- Structural modeling for existing conditions
- Capacity assessment and residual strength analysis
- Preparing assessment reports and recommendations

Day 5: Repair, Strengthening, and Case Studies

- Common repair and rehabilitation techniques
- Use of FRP, steel jacketing, and concrete overlays
- Case studies of assessment and strengthening projects

Certification

Participants who successfully complete the course will receive a Certificate of Completion in Structural Condition Assessment of Existing Structures Training, recognizing their expertise in evaluating and maintaining the integrity of built infrastructure.

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?

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