

ADVANCED MATERIALS FOR CONSTRUCTION AND REPAIR OF CONCRETE STRUCTURES

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"Innovative Materials. Stronger Structures. Sustainable Repairs."

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 overview of the latest innovations in construction and repair materials used for concrete structures. It focuses on high-performance materials that enhance durability, strength, and service life — including fiber-reinforced concrete, polymer-based repair systems, corrosion inhibitors, and self-healing technologies.

Objectives

- Identify advanced construction and repair materials.
- Understand material selection criteria for various environments.
- Apply best practices in repair techniques and material compatibility.
- Assess performance of modern materials through testing and analysis.
- Evaluate innovative technologies for sustainable infrastructure.

Why Attend

- Get up-to-date on international innovations in concrete repair.
- Improve the life cycle and reliability of concrete assets.
- Reduce long-term maintenance and downtime.
- Gain confidence in material specification and application.

Target Audience

- Civil Engineers
- Structural Engineers
- QA/QC and Materials Engineers
- Construction & Repair Contractors
- Asset and Infrastructure Managers

Individual Benefits

- Enhance technical knowledge in concrete technologies.
- Learn hands-on applications and field examples.
- Earn a recognized certificate for your CV.

Organizational Benefits

- Reduce structural failures and premature degradation.
- Improve decision-making in material procurement.
- Strengthen resilience and sustainability of assets.

Instructional Methodology

- Lectures with real project visuals
- Case studies and failure analysis
- Material selection workshops
- Group discussions & knowledge sharing

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: Introduction to Advanced Concrete Materials

- Module 1 (07:30 – 09:30): Types of Advanced Concrete
- Module 2 (09:45 – 11:15): High-Performance & Self-Healing Concrete
- Module 3 (11:30 – 01:00): Role of Additives and Fiber Reinforcements

Day 2: Repair Materials and Surface Treatments

- Module 4: Cementitious & Polymer-Modified Repair Materials
- Module 5: Surface Preparation & Bonding Techniques
- Module 6: Coatings & Corrosion Prevention Systems

Day 3: Durability and Material Testing

- Module 7: Durability Factors in Harsh Environments
- Module 8: Performance Testing & QA Procedures
- Module 9: Compatibility and Application Failures

Day 4: Selection and Case Studies

- Module 10: Criteria for Selecting Repair Materials
- Module 11: Real-World Case Studies (Marine, Industrial, etc.)
- Module 12: Evaluation Tools and Field Testing

Day 5: Sustainability and Innovation

- Module 13: Sustainable Material Technologies
- Module 14: Smart & Nano Materials
- Module 15: Group Activity + Certification Ceremon

Certification

Participants will receive a Certificate of Completion in Advanced Materials for Construction and Repair of Concrete Structures, validating their expertise in applying innovative and sustainable construction materials to enhance durability and performance.

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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