

CONCRETE TESTING & QUALITY CONTROL

"Ensuring structural integrity through advanced concrete testing and quality control techniques"

Schedule

Date	Venue	Fees (Face-to-Face)
19 - 21 May 2026	Riyadh, KSA	USD 2495 per delegate

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

Introduction

Quality control in concrete is crucial for the durability, strength, and safety of construction projects. Accurate testing ensures that materials meet design specifications and regulatory standards, minimizing structural failures and associated risks.

This 3-day intensive training equips participants with practical knowledge and skills in concrete testing and quality control. Participants will learn the latest testing methods, standards, and techniques to assess concrete properties, ensuring high-quality construction outcomes.

Objectives

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

- Understand concrete properties, mix design, and testing requirements
- Apply standard testing methods for fresh and hardened concrete
- Interpret test results to assess concrete quality
- Implement quality control procedures in construction projects
- Ensure compliance with industry standards and regulations
- Identify and mitigate potential defects or quality issues
- Enhance overall project safety and durability

Why Attend

- Gain practical skills in concrete testing and quality assessment
- Ensure compliance with industry and regulatory standards
- Improve construction quality and project reliability
- Learn best practices for monitoring and controlling concrete quality
- Enhance your professional competence in civil and structural engineering

Target Audience

This program is designed for:

- Civil and structural engineers
- Quality control and construction managers
- Site supervisors and technical staff
- Laboratory technicians and material engineers
- Professionals responsible for concrete testing and construction quality

Individual Benefits

Key competencies that will be developed include:

- Knowledge of concrete mix design and material properties
- Skills in performing and interpreting concrete tests
- Ability to implement quality control processes on-site
- Knowledge of industry standards and regulatory compliance
- Enhanced confidence in managing concrete quality assurance

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Improved construction quality and structural integrity
- Reduced risk of defects and project delays
- Enhanced adherence to industry and safety standards
- Strengthened quality assurance procedures on projects
- Better decision-making regarding materials and construction methods

Instructional Methodology

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

- Strategy Briefings - Principles of concrete testing and quality control
- Case Studies - Real-world examples of testing and quality challenges
- Workshops - Hands-on exercises in concrete sampling, testing, and reporting
- Peer Exchange - Discussions on best practices and lessons learned
- Tools - Templates, checklists, and practical guidelines for quality assurance

MAWA EVENTS

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Course Outline

Detailed 3-Day Course Outline

Training Hours: 9:00 AM – 3:30 PM Daily Format: 3–4 Learning Modules | Coffee breaks included

Day 1: Fundamentals of Concrete and Testing

Module 1: Introduction to Concrete Properties (09:00 – 10:30)

- Concrete composition, types, and mix design
- Factors affecting quality and performance

Module 2: Fresh Concrete Testing (10:45 – 12:15)

- Workability, slump test, and air content
- Sampling procedures and standards

Module 3: Laboratory Safety and Preparation (01:00 – 02:15)

- Safe handling of materials and equipment
- Preparation for testing procedures

Module 4: Workshop – Fresh Concrete Testing (02:30 – 03:30)

- Hands-on exercises in slump and air content testing

Day 2: Hardened Concrete Testing

Module 1: Strength Testing Methods (09:00 – 10:30)

- Compressive, tensile, and flexural strength tests
- Curing procedures and standard requirements

Module 2: Durability and Quality Assessment (10:45 – 12:15)

- Density, permeability, and shrinkage testing
- Identifying potential quality issues

Module 3: Interpretation of Test Results (01:00 – 02:15)

- Analyzing and reporting findings
- Making informed decisions for quality control

Module 4: Workshop – Hardened Concrete Testing (02:30 – 03:30)

- Practical exercises in compressive and flexural testing

Day 3: Quality Control and Best Practices

Module 1: Implementing Quality Control Procedures (09:00 – 10:30)

- On-site monitoring, inspection, and reporting
- Maintaining compliance with standards

Module 2: Troubleshooting and Corrective Actions (10:45 – 12:15)

- Detecting and mitigating defects or deviations
- Case studies of quality failures and lessons learned

Module 3: Best Practices in Construction Quality Assurance (01:00 – 02:15)

- Integrating testing and monitoring into project workflow
- Continuous improvement strategies

Module 4: Workshop – Action Plan (02:30 – 03:30)

- Developing practical strategies for quality control
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Group discussion and review

Certification

Participants will receive a Certificate of Completion in Concrete Testing & Quality Control, validating their competence in performing concrete tests, ensuring quality, and implementing effective quality control procedures in construction projects.

Why Choose MAWA Events

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