



London TDM

# Civil and Construction Engineering Training Courses

**Course Venue:** Malaysia - Kuala Lumpur

**Course Date:** From 30 November 2025 To 04 December 2025

**Course Place:** Royale Chulan Hotel

**Course Fees:** 6,000 USD

## Introduction

This professional course on "Waterproofing and Concrete Repair Techniques" is designed to provide industry practitioners with the essential knowledge and practical skills to effectively diagnose, repair, and mitigate water intrusion and concrete deterioration problems. The course covers various strategies, materials, and technologies currently used in the field, ensuring that participants can address these challenges with confidence and expertise.

## Objectives

- Understand the principles of waterproofing and the importance of protective measures.
- Identify common concrete defects and deterioration mechanisms.
- Learn about modern materials and techniques used in waterproofing and concrete repair.
- Develop skills for performing effective inspections and quality control in waterproofing projects.
- Gain insights into sustainable practices and innovation in concrete repair and protection.

## Course Outlines

### Day 1: Basics of Waterproofing

- Introduction to waterproofing and its significance.
- Types of waterproofing: positive side, negative side, and blindside methods.
- Materials used in waterproofing systems: membranes, coatings, and sealants.
- Common waterproofing challenges and how to address them.
- Case studies on successful waterproofing projects.

### Day 2: Identifying and Diagnosing Concrete Defects

- Overview of concrete composition and properties.
- Common defects in concrete: cracks, spalling, and corrosion.
- Techniques for diagnosing underlying causes of concrete deterioration.
- Using non-destructive testing methods for concrete assessment.
- Documenting and reporting findings from concrete inspections.

### Day 3: Concrete Repair Techniques

- Introduction to repair materials: mortars, epoxies, and grouts.
- Surface preparation and application techniques for repair products.
- Structural vs. non-structural repairs: methods and considerations.
- Curing and finishing techniques to ensure long-term durability.
- Quality control and testing of concrete repairs.

### Day 4: Advanced Waterproofing Systems

- Innovative waterproofing technologies: crystalline and integral systems.
- Waterproofing for below-grade and below-water structures.
- Retrofitting existing structures with modern waterproofing solutions.
- Waterproofing details for critical points: joints, penetrations, and transitions.
- Maintenance and lifecycle management of waterproofing systems.

## **Day 5: Sustainability and Innovations in Waterproofing and Repair**

- Green materials and sustainable practices in concrete repair.
- Innovative strategies for enhancing concrete durability and longevity.
- Impact of climate change on waterproofing and repair strategies.
- Implementing smart technologies in inspection and maintenance.
- Future trends and advancements in the industry.