



London TDM

# Civil and Construction Engineering Training Courses

**Course Venue:** United Arab Emirates - Dubai

**Course Date:** From 02 November 2025 To 06 November 2025

**Course Place:** Downtown Dubai

**Course Fees:** 5,000 USD

## Introduction

Facade engineering and curtain wall systems are fundamental components of modern architecture, combining aesthetics with functionality. This comprehensive 5-day course is designed for professionals looking to deepen their understanding of facade technologies, materials, and design principles used in modern-day construction. Participants will gain insights into the engineering, manufacturing, and installation processes, along with performance evaluation techniques to deliver cutting-edge facades that meet rigorous environmental and safety standards.

- Enhance understanding of facade systems and their components.
- Analyze the structural performance and environmental impact of curtain walls.
- Develop skills to integrate aesthetics with functionality in facade design.
- Understand the latest technologies and materials used in facade engineering.
- Learn about the standards and codes governing facade construction and safety.

## Course Outlines

### Day 1: Introduction to Facade Engineering

- Overview of facade systems and their historical development.
- Basic principles of facade engineering and its role in architecture.
- Types of curtain walls: stick systems, unitized systems, and point-supported facades.
- Material selection: glass, aluminum, steel, and composite materials.
- Introduction to facade design software and tools.

### Day 2: Structural and Thermal Performance

- Analysis of structural loads and stress management.
- Thermal insulation and energy efficiency in facade systems.
- Glazing options and their impact on thermal performance.
- Evaluating wind loads and seismic considerations for facade engineering.
- Testing and simulation methods for structural performance.

### Day 3: Design and Aesthetics

- Integrating aesthetics with function in facade design.
- Color, texture, and form considerations in curtain wall systems.
- Design case studies of iconic facade projects.
- Advancements in facade technology: double-skin facades and dynamic facades.
- Collaboration between architects, engineers, and builders in facade projects.

### Day 4: Facade Technologies and Materials

- Innovations in facade materials and their applications.
- Sustainable materials and environmentally-friendly facade solutions.
- Smart facades and integration of technology in curtain walls.
- Manufacturing processes and quality control in facade construction.
- Lifecycle assessment and maintenance of facade systems.

## **Day 5: Standards, Codes, and Safety**

- International standards and codes for facade engineering.
- Fire safety considerations and solutions in curtain wall systems.
- Risk assessment and mitigation in facade construction.
- Documentation and compliance for facade projects.
- Future trends and sustainability in facade system design.