



London TDM

# Civil and Construction Engineering Training Courses

**Course Venue:** United Kingdom - London

**Course Date:** From 01 March 2026 To 05 March 2026

**Course Place:** London Paddington

**Course Fees:** 7,500 USD

## Introduction

This professional course on Roads and Highway Engineering is designed to equip participants with comprehensive knowledge and skills necessary for the planning, design, construction, and maintenance of roads and highways. The course will cover fundamental principles, modern techniques, and best practices in road and highway engineering to ensure safe, durable, and efficient transportation networks.

## Objectives

- Understand the basics of road and highway engineering.
- Learn about the materials and technologies used in road construction.
- Develop skills in planning and designing road infrastructure.
- Explore maintenance strategies for roads and highways.
- Gain insights into environmental considerations and sustainability in road projects.

## Course Outlines

### Day 1: Introduction to Road and Highway Engineering

- Overview of transportation systems and infrastructure.
- The role and significance of roads and highways in society.
- Historical development of road engineering.
- Current trends and future challenges in the field.
- Regulatory frameworks and standards in road construction.

### Day 2: Materials and Technologies in Road Construction

- Types of materials used in road construction and their properties.
- Pavement design and material selection criteria.
- Emerging technologies in road building.
- Sustainability and recycling in road material usage.
- Case studies on innovative materials and methods.

### Day 3: Planning and Design of Road Infrastructure

- Principles of geometric design in road engineering.
- Traffic analysis and forecasting methods.
- Infrastructure layout and alignment considerations.
- Intersections, interchanges, and urban road design.
- Utilizing software tools for road design optimization.

### Day 4: Maintenance and Rehabilitation of Roads

- Importance of road maintenance for longevity and safety.
- Evaluation and assessment of road conditions.
- Repair and rehabilitation techniques for pavements.
- Maintenance management systems and strategies.
- Innovative approaches to road maintenance.

## **Day 5: Environmental and Sustainability Considerations**

- Assessing environmental impacts of road projects.
- Integrating sustainable practices in road engineering.
- Mitigation strategies and adherence to environmental regulations.
- Use of green technologies and materials in road construction.
- Future directions for sustainable road and highway development.