London TDM

Civil and Construction Engineering Training Courses

Course Venue: United Arab Emirates - Dubai

Course Date: From 12 July 2026 To 16 July 2026

Course Place: Downtown Dubai

Course Fees: 5,000 USD

Introduction

Welcome to the "Pavement Design and Maintenance" professional course. This comprehensive 5-day course is designed to equip participants with a thorough understanding of pavement engineering, covering both design and maintenance aspects to ensure the longevity and functionality of pavement structures.

Objectives

- Understand the fundamental principles of pavement design and structure.
- Learn advanced techniques for pavement analysis and design.
- Explore various materials used in pavement construction and their properties.
- Identify common pavement distresses and maintenance strategies.
- Gain practical insights into real-world pavement engineering projects.

Course Outlines

Day 1: Introduction to Pavement Engineering

- Overview of pavement types and structures
- Basic principles of pavement design
- Understanding traffic loading and its impact on pavements
- Soil properties and subgrade preparation
- Introduction to pavement materials

Day 2: Pavement Design Fundamentals

- Methods of pavement design: Empirical vs Mechanistic-Empirical
- Pavement design parameters and calculations
- Design of flexible pavements
- Design of rigid pavements
- Case studies in pavement design

Day 3: Pavement Materials and Construction

- Types of materials used in pavement construction
- Properties and testing of asphalt and concrete
- Mix design for asphalt and concrete pavements
- Construction techniques and equipment
- Quality control and assurance in pavement construction

Day 4: Pavement Maintenance and Rehabilitation

- Common pavement distresses and their causes
- Inspection and evaluation of pavement conditions
- Preventive maintenance strategies
- Rehabilitation techniques for damaged pavements
- Cost analysis and lifecycle management

Day 5: Advanced Topics and Case Studies

- Innovations in pavement engineering
- Sustainable pavement design and recycling
- Application of geosynthetics in pavement structures
- Case studies on complex pavement projects
- Course review and discussion