informatech



CONSTRUCTION MANAGEMENT | CM-003

Road Construction Materials and Construction Technologies

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Course content

Why Attend

Road infrastructure is a critical component of economic development and connectivity. This course provides a comprehensive understanding of the materials and modern construction technologies used in road projects. Participants will learn how to select appropriate materials, apply best construction practices, and ensure quality and durability in various environmental and traffic conditions. By attending, you will enhance your ability to deliver cost-effective, sustainable, and high-performance road projects while minimizing maintenance and lifecycle costs.

Course Methodology

The course combines interactive lectures, practical examples, and case studies from real road construction projects. Participants will engage in group discussions, material evaluation exercises, and problem-solving sessions. Demonstrations of construction techniques and quality control procedures will be included, along with exposure to modern equipment and technologies used in the field.

Course Objectives

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

- Identify and evaluate materials used in road construction
- Understand the properties and performance of asphalt, concrete, and aggregates
- Apply appropriate construction techniques for different road types
- Implement quality control and assurance procedures
- Analyze common road defects and failures
- Select suitable maintenance and rehabilitation methods
- Understand sustainable and innovative road construction technologies
- Interpret technical specifications and standards

Target Audience



Course content

Target Audience

- Civil Engineers and Highway Engineers
- Construction and Site Engineers
- Project Managers and Supervisors
- Quality Control and Materials Engineers
- Consultants and Contractors in infrastructure projects

Target Competencies

- Material selection and testing
- Road construction planning and execution
- Quality control and inspection
- Pavement design understanding
- Problem-solving in construction challenges
- Maintenance and rehabilitation planning
- Technical specification interpretation

Course outline

Day 1: Fundamentals of Road Construction Materials

- Introduction to road construction and pavement types
- Overview of flexible and rigid pavements
- Properties of aggregates and their classification
- Bituminous materials and asphalt basics
- Cement and concrete for road construction

Day 2: Material Testing and Quality Control



Course content

Course outline

- Laboratory and field testing of aggregates
- Asphalt testing methods (penetration, viscosity, etc.)
- Concrete testing and mix design basics
- Quality assurance vs quality control
- Standards and specifications (ASTM, AASHTO, EN)

Day 3: Road Construction Techniques

- Site preparation and earthworks
- Subgrade, subbase, and base construction
- Asphalt paving techniques and equipment
- Concrete road construction methods
- Compaction methods and equipment

Day 4: Pavement Performance and Maintenance

- Common pavement distresses and failures
- Causes of cracking, rutting, and potholes
- Preventive maintenance techniques
- Rehabilitation and overlay methods
- Life-cycle cost considerations

Day 5: Advanced Technologies and Sustainable Practices

- Modern road construction technologies
- Use of recycled materials (RAP, recycled concrete)
- Sustainable and green road construction practices
- Smart roads and innovative materials



Course content

Course outline

• Case studies and project review



Seminar dates

Available seminar dates

Live dates and pricing for Road Construction Materials and Construction Technologies generated from the course details page.

Date	Location	Format	Fee
16 - 20 November 2026	Paris - France	Classroom	**€3,600.-**
7 - 11 December 2026	Frankfurt - Germany	Classroom	**€2,600.-**
11 - 15 January 2027	Amsterdam - Netherlands	Classroom	**€3,400.-**
8 - 12 February 2027	London - U.K	Classroom	**€3,360.-**
8 - 12 March 2027	Istanbul - Turkey	Classroom	**€2,280.-**
12 - 16 April 2027	Cape Town - South Africa	Classroom	**€3,400.-**
10 - 14 May 2027	Barcelona - Spain	Classroom	**€3,080.-**
14 - 18 June 2027	Paris - France	Classroom	**€3,600.-**
12 - 16 July 2027	Frankfurt - Germany	Classroom	**€2,600.-**
9 - 13 August 2027	Amsterdam - Netherlands	Classroom	**€3,400.-**
13 - 17 September 2027	London - U.K	Classroom	**€3,360.-**
11 - 15 October 2027	Istanbul - Turkey	Classroom	**€2,280.-**
8 - 12 November 2027	Vienna - Austria	Classroom	**€3,400.-**
13 - 17 December 2027	Barcelona - Spain	Classroom	**€3,080.-**

Live online option	Online delivery is available at €1,850.-.