

aractech

Global Learning for Operational Leaders



CONSTRUCTION MANAGEMENT | CM-003

Road Construction Materials and Construction Technologies

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Waarderweg 50, 2031PB Haarlem - Netherlands.

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

- 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

Target Audience

- Civil Engineers and Highway Engineers
- Construction and Site Engineers
- Project Managers and Supervisors
- Quality Control and Materials Engineers

Course outline

Detailed course outline

Day-by-day outline for Road Construction Materials and Construction Technologies.

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

- 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

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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
- 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
11 - 15 May 2026	Munich	Classroom	€2,415
8 - 12 June 2026	Amsterdam	Classroom	€2,975
6 - 10 July 2026	London	Classroom	€2,940
10 - 14 August 2026	Istanbul	Classroom	€1,995
14 - 18 September 2026	Vienna	Classroom	€2,975
5 - 9 October 2026	Barcelona	Classroom	€2,695
16 - 20 November 2026	Paris	Classroom	€3,150

Live online option

Online delivery is available at €1,250.