

An aerial photograph of a large-scale construction project. The site is filled with a complex network of blue and red metal scaffolding. Numerous construction workers, wearing orange safety vests and yellow hard hats, are visible throughout the site, engaged in various tasks. The ground is a mix of concrete and dirt, with some areas covered in green safety netting. The overall scene depicts a busy and organized construction environment.

aractech

Global Learning for Operational Leaders

CONSTRUCTION MANAGEMENT

Construction Materials and Building Systems

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Course content

Why Attend

Course Introduction

This Construction Materials and Building Systems training course offers a comprehensive understanding of construction materials and building systems, focusing on both traditional and modern technologies.

Course Methodology

Course Objectives

Target Audience

Course outline

Detailed course outline

Day-by-day outline for Construction Materials and Building Systems.

Day 1 - Introduction to Construction Materials

- Overview of construction materials
- Types and classifications
- Properties of concrete and steel
- Factors influencing material selection
- Material sustainability and life cycle
- Case studies on material usage

Day 2 - Building Systems and Integration

- Understanding building systems
- HVAC systems and energy efficiency
- Electrical and plumbing systems
- Smart building technologies
- Integration of systems for sustainability
- Practical examples of system design

Course outline

Detailed course outline

Day-by-day outline for Construction Materials and Building Systems.

Day 3 - Sustainable Construction Practices

- Principles of sustainable construction
- Green building materials
- Waste management in construction
- Energy-efficient building designs
- LEED certification and standards
- Case studies in green construction

Day 4 - Structural Design and Analysis

- Basics of structural analysis
- Load-bearing structures
- Design of reinforced concrete
- Foundations and ground stability
- Construction safety and compliance
- Hands-on design exercises

Course outline

Detailed course outline

Day-by-day outline for Construction Materials and Building Systems.

Day 5 - Latest Trends and Innovations

- Emerging construction technologies
- Use of AI and automation in construction
- Prefabrication and modular construction
- Digital twins and BIM (Building Information Modelling)
- Future of construction materials
- Review and final project presentation

Seminar dates

Available seminar dates

Live dates and pricing for Construction Materials and Building Systems generated from the course details page.

Date	Location	Format	Fee
8 - 12 June 2026	Barcelona	Classroom	€2,695
6 - 10 July 2026	London	Classroom	€2,940
10 - 14 August 2026	Munich	Classroom	€2,415
14 - 18 September 2026	Barcelona	Classroom	€2,695
5 - 9 October 2026	Paris	Classroom	€3,150
16 - 20 November 2026	Frankfurt	Classroom	€2,275
7 - 11 December 2026	Barcelona	Classroom	€2,695

Live online option

Online delivery is available at €1,250.