

# **Artificial Intelligence for Construction**

## **Venue Information**

Venue: London UK

Place:

**Start Date:** 2025-10-20 **End Date:** 2025-10-24

## **Course Details**

Net Fee: £4750.00 Duration: 1 Week

Category ID: CACETC

Course Code: CACETC-84

# **Syllabus**

### Learning Objectives

- Understand the fundamentals of AI and its relevance to the construction industry.
- Explore how AI enhances planning, design, and construction processes.
- Examine real-world case studies of AI implementation in construction.
- Identify challenges and ethical considerations of AI applications.
- Develop strategic insights into adopting AI in construction organizations.

#### **Target Audience**

This course is intended for civil engineers, construction project managers, architects, consultants, infrastructure planners, and anyone interested in the future of construction technologies.

Prerequisites

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5 Days (Theoretical Concept-Basea)

Course Outline

Day 1: Introduction to AI in Construction

- What is Artificial Intelligence?
- Al vs Machine Learning vs Deep Learning
- Overview of Construction Challenges Al Can Solve
- Global Trends and Market Impact
- Case Studies: Smart Construction Projects

Day 2: Data-Driven Construction

- Role of Big Data in Construction
- Data Sources in Construction Projects
- Al-Based Planning and Forecasting
- Risk Management with Predictive Analytics
- Applications: Safety Predictions, Quality Monitoring

Day 3: Al in Design & Planning

- Al in Building Information Modeling (BIM)
- Al Tools for Design Optimization
- Natural Language Processing in Documentation
- Generative Design and Al-based Architecture
- Case Examples: Al-Driven Design Projects

Day 4: Al in Construction Management

- Al for Project Scheduling & Budgeting
- Robotics & Automation in Construction
- Al-Powered Monitoring Systems (Drones, IoT)
- Human-Al Collaboration Models

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- Digital I wins and Al Integration
- Sustainable and Smart Infrastructure
- Al Policy & Regulation in Construction
- Strategy for Al Adoption in Organizations
- Final Discussion: Barriers, Opportunities & Roadmap

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