

# Intelligent Systems and Smart Construction

## Venue Information

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**Venue:** Spain, Barcelona

**Place:** Grand Hotel Central

**Start Date:** 2025-09-08

**End Date:** 2025-09-12

## Course Details

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**Net Fee:** £5722.00

**Duration:** 1 Week

**Category ID:** CACETC

**Course Code:** CACETC-81

## Syllabus

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### Learning Objectives

- Understand how AI is embedded into hardware systems and site operations.
- Study real-world applications such as drones, robots, and IoT systems.
- Learn how smart systems improve safety, quality, and productivity.
- Evaluate practical implementation of digital twins and automation.

### Target Audience

Site managers, automation specialists, project engineers, and safety officers interested in high-tech construction applications.

### Prerequisites

Familiarity with construction project workflows and digital tools is beneficial.

## Daily Course Breakdown

### Day 1

Study the integration of robotics and AI on construction sites. Explore how computer vision enhances automation in physical construction tasks.

### Day 2

Delve into the role of drones, photogrammetry, and IoT in enabling smart monitoring and real-time construction intelligence.

### Day 3

Understand how predictive maintenance is powered by AI, and how intelligent scheduling systems are optimizing resource allocation.

### Day 4

Explore safety and quality control enhancements using AI tools. Discover how digital twin technology provides continuous project visibility.

### Day 5

Analyze the fusion of AI with Building Information Modeling (BIM) and Geographic Information Systems (GIS), and learn the key challenges of deploying such integrations.