



Digital Transformation and Innovation

## Smart Cities and Infrastructure Development

## Course Introduction

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This training course is designed to provide participants with a comprehensive understanding of the concepts, technologies, and practices involved in the development of smart cities.

The course will cover key areas such as IoT integration, urban mobility, sustainable infrastructure, data analytics, and citizen engagement. By examining real-world case studies and emerging trends, participants will gain insights into the planning, implementation, and management of smart city initiatives.

The course will also address

The challenges and opportunities in creating more efficient, livable, and resilient urban environments. Participants will leave with the knowledge and skills needed to contribute to the development of smart cities in their respective fields.

### Training Course Methodology

This course is designed to be interactive and participatory, and includes various learning tools to enable the participants to function effectively and efficiently. The course will use sessions, exercises, and case applications, and presentation about proven-by-practice methods, new insights and ideas about emotional intelligence and its effects in a corporate world.

## Target Audience

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- Urban Planners
- Civil Engineers
- Infrastructure Managers
- Smart City Consultants
- Government Officials
- Architects
- Project Managers
- Transportation Planners

- Environmental Engineers
- IoT Specialists

## Learning Objectives

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- Understand the fundamental concepts and components of smart cities.
- Understand the fundamental concepts, components, and benefits of smart cities, including their historical evolution and future trends.
- Gain knowledge of IoT technologies, their integration into urban environments, and the associated connectivity and security considerations.
- Explore advancements in urban mobility and transportation, focusing on smart systems, autonomous vehicles, and sustainable initiatives.
- Learn about sustainable infrastructure practices, including green building, renewable energy, smart grids, and waste and water management.
- Develop skills in data analytics and citizen engagement, emphasizing real-time data processing, smart governance, and ethical considerations in data use.

## Course Outline

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- **Day 01**

### **Introduction to Smart Cities**

- Definition and Components of Smart Cities
- Historical Evolution and Future Trends
- Key Stakeholders and Their Roles
- Policy and Regulatory Frameworks
- Benefits and Challenges of Smart Cities
- Global Case Studies

- **Day 02**

### **IoT and Connectivity in Smart Cities**

- Internet of Things (IoT) Basics

- IoT Architecture and Protocols
- Smart Sensors and Devices
- Connectivity Technologies (5G, Wi-Fi, LPWAN)
- Data Collection and Management
- Security and Privacy Concerns

### • Day 03

#### **Urban Mobility and Transportation**

- Smart Transportation Systems
- Public Transit Innovations
- Autonomous Vehicles
- Traffic Management Solutions
- Mobility-as-a-Service (MaaS)
- Sustainable Transportation Initiatives

### • Day 04

#### **Sustainable Infrastructure and Environment**

- Green Building Technologies
- Renewable Energy Integration
- Smart Grids and Energy Management
- Waste Management Systems
- Water Resource Management
- Climate Resilience and Adaptation

### • Day 05

#### **Data Analytics and Citizen Engagement**

- Big Data Analytics in Smart Cities
- Real-time Data Processing and Visualization
- Citizen Participation Platforms
- Smart Governance and E-Government Services
- Ethical Considerations in Data Use
- Future Trends in Smart City Data Analytics

# Confirmed Sessions

FROM	TO	DURATION	FEES	LOCATION
April 14, 2025	April 18, 2025	5 days	4250.00 \$	UAE - Dubai
Sept. 1, 2025	Sept. 5, 2025	5 days	4250.00 \$	UAE - Dubai
Nov. 3, 2025	Nov. 7, 2025	5 days	5950.00 \$	USA - Texas