Urban Infrastructure Planning Training Course

Professional Development Training Course Outline

Category	Construction Institute	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

Urban Infrastructure Planning is a critical discipline shaping the future of smart cities, sustainable urban development, climate-resilient infrastructure, and inclusive growth. Rapid urbanization, population expansion, and technological transformation require professionals who can design, manage, and optimize modern urban systems. Urban Infrastructure Planning Training Course equips participants with advanced knowledge of urban planning strategies, infrastructure resilience, digital transformation, GIS-based planning, sustainable mobility, and data-driven decision-making to create efficient, safe, and future-ready cities.

This comprehensive training program focuses on emerging trends such as smart city development, green infrastructure, urban analytics, climate adaptation, public-private partnerships (PPP), transit-oriented development (TOD), and resilient city frameworks. Through practical learning, real-world case studies, and applied methodologies, participants gain the skills needed to address complex urban challenges and deliver innovative infrastructure solutions aligned with global sustainability goals and UN Sustainable Development Goals (SDGs).

Programme Curriculum

Urban Infrastructure Planning Training Course

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Course Duration

5 days

Course Objectives

By completing this Urban Infrastructure Planning Training Course, participants will be able to:

1. Understand advanced concepts of urban infrastructure planning and sustainable city development.
2. Develop strategies for smart city transformation and digital urban ecosystems.
3. Apply GIS, spatial analytics, and geospatial technologies for infrastructure decision-making.
4. Design climate-resilient and disaster-ready urban infrastructure systems.
5. Implement sustainable transportation planning and transit-oriented development (TOD).
6. Evaluate urban infrastructure projects using data-driven planning and urban intelligence.
7. Apply principles of green infrastructure and low-carbon urban development.
8. Improve skills in urban mobility management and integrated transport planning.
9. Understand modern approaches to water, waste, energy, and utility infrastructure management.
10. Develop effective frameworks for urban governance and infrastructure policy planning.
11. Analyze infrastructure investment opportunities through PPP models and project financing strategies.
12. Use innovative technologies including AI, IoT, digital twins, and urban simulation tools.
13. Create strategic solutions for inclusive, resilient, and future-ready urban environments.

Target Audience

1. Urban planners and city development professionals
2. Civil engineers and infrastructure consultants
3. Government officials and municipal authorities
4. Smart city project managers and technology specialists
5. Architects and urban designers
6. Transportation and mobility planning professionals
7. Real estate developers and infrastructure investors
8. Sustainability, climate, and environmental management professionals

Course Modules

Module 1: Fundamentals of Urban Infrastructure Planning

- Principles of **modern urban planning and infrastructure development**
- Urban growth patterns and sustainable city frameworks
- Components of urban infrastructure networks
- Infrastructure planning lifecycle and strategic approaches
- Case Study: **Singapore Urban Development Model – Integrated Planning for Sustainable Growth**

Module 2: Smart Cities and Digital Urban Transformation

- Smart city frameworks and technology-enabled urban management
- Applications of **IoT, AI, and big data analytics in cities**
- Digital twins for infrastructure monitoring and planning
- Smart governance and connected urban services
- Case Study: **Barcelona Smart City Initiative – Digital Innovation in Urban Management**

Module 3: GIS and Data-Driven Urban Planning

- Fundamentals of **Geographic Information Systems (GIS)**
- Spatial analysis for infrastructure decision-making
- Remote sensing and urban mapping techniques
- Urban data visualization and analytics
- Case Study: **Amsterdam Smart Mapping Strategy – Data-Based City Planning**

Module 4: Sustainable Transportation and Urban Mobility

- Sustainable mobility planning concepts
- Public transport optimization and TOD strategies
- Electric mobility and future transportation systems
- Walkable cities and active transportation planning
- Case Study: **Curitiba Bus Rapid Transit (BRT) Model – Sustainable Mobility Planning**

Module 5: Climate Resilient and Green Infrastructure

- Climate adaptation strategies for urban systems
- Green buildings and nature-based solutions
- Flood management and disaster-resilient infrastructure
- Low-carbon urban development approaches
- Case Study: **Copenhagen Climate Adaptation Plan – Resilient Urban Design**

Module 6: Urban Utilities and Infrastructure Management

- Integrated water resource management
- Sustainable waste management systems
- Urban energy infrastructure planning
- Utility network optimization and maintenance
- Case Study: **Tokyo Infrastructure Management System – Efficient Urban Services**

Module 7: Infrastructure Financing, Governance, and Policy

- Urban infrastructure investment strategies
- Public-private partnership (PPP) frameworks
- Infrastructure project evaluation techniques
- Policy development and stakeholder management
- Case Study: **London Infrastructure Investment Framework – Strategic Urban Growth**

Module 8: Future Trends in Urban Infrastructure Planning

- Artificial intelligence applications in urban planning
- Digital twins and predictive infrastructure management
- Autonomous mobility and future city concepts
- Circular economy approaches in urban development

- Case Study: **NEOM Smart City Vision – Future-Oriented Urban Innovation**

Training Methodology

This course employs a participatory and hands-on approach to ensure practical learning, including:

- Interactive lectures and presentations.
- Group discussions and brainstorming sessions.
- Hands-on exercises using real-world datasets.
- Role-playing and scenario-based simulations.
- Analysis of case studies to bridge theory and practice.
- Peer-to-peer learning and networking.
- Expert-led Q&A sessions.
- Continuous feedback and personalized guidance.

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to DATASTAT CONSULTANCY LTD account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
07 Sep 2026	11 Sep 2026	Online	$1,000
07 Sep 2026	11 Sep 2026	Physical	$1,500

Start Date	End Date	Location	Price
14 Sep 2026	18 Sep 2026	Online	$1,000
14 Sep 2026	18 Sep 2026	Physical	$1,500
21 Sep 2026	25 Sep 2026	Online	$1,000
21 Sep 2026	25 Sep 2026	Physical	$1,500
28 Sep 2026	02 Oct 2026	Online	$1,000
28 Sep 2026	02 Oct 2026	Physical	$1,500

Ready to enroll or request a customized program? Book online or contact us:

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