Sustainable Urban Planning and Smart City Development Training Course



23 - 27 Nov 2026

Barcelona

5900 € (Per Person)

Ref: #SUS3946_143162

Course Introduction / Overview:

This comprehensive training course provides a deep dive into the interconnected fields of sustainable urban planning and smart city development. In an era of rapid urbanization and climate change, creating cities that are efficient, resilient, and livable is a global imperative. This program is designed to equip participants with the knowledge and skills to lead this transformation. We will explore the foundational principles of sustainable urbanism, drawing from the insights of leading thinkers like Anthony M. Townsend, author of "Smart Cities: Big Data, Civic Hackers, and the Quest for a New Utopia". The curriculum moves beyond theoretical concepts to address the practical application of smart technologies, including IoT, big data analytics, and digital twin technology, in solving real-world urban challenges. At BIG BEN Training Center, we have structured this course to cover everything from green infrastructure and renewable energy integration to smart governance and citizen-centric design. Participants will learn to develop holistic strategies that balance economic growth, social equity, and environmental protection, ensuring they are prepared to design, manage, and innovate the cities of the future. This course is your gateway to mastering the frameworks and tools necessary for building smarter, more sustainable urban environments for generations to come.

Target Audience / This training course is suitable for:

- Urban Planners and City Managers.
- Civil Engineers and Infrastructure Specialists.
- Government Officials and Public Policy Advisors.
- Technology Consultants and Smart City Solution Architects.
- Real Estate Developers and Project Managers.
- Sustainability Officers and Environmental Consultants.
- Data Analysts and Urban Informatics Professionals.
- Community Leaders and Non-Profit Organization Staff.
- Investment and Finance Professionals in the infrastructure sector.

Target Sectors and Industries:

- Government and Public Administration.
- Real Estate and Construction.
- Information Technology and Telecommunications.
- Engineering and Architectural Consulting.
- Energy and Utilities.
- Transportation and Logistics.
- Environmental Services and Waste Management.
- Financial Services and Investment Banking.

Target Organizations Departments:

- Urban Planning and Development.
- Public Works and Infrastructure.
- Information Technology (IT) and Data Analytics.
- Sustainability and Environmental Management.
- Policy and Strategic Planning.
- Engineering and Operations.
- Economic Development.
- Community Engagement and Public Relations.

Course Offerings:

By the end of this course, the participants will have able to:

- Develop integrated strategies for sustainable urban development.
- Analyze the role of IoT, big data, and AI in smart city management.
- Design and evaluate green infrastructure projects for urban resilience.
- Formulate policies for smart governance and effective citizen engagement.
- Assess various smart mobility and sustainable transportation solutions.
- Master the principles of circular economy within an urban context.
- Implement frameworks for smart energy grids and waste management systems.
- Navigate the financial models and public-private partnerships for smart city projects.
- Apply data-driven decision-making to urban planning challenges.
- Lead the implementation of smart city initiatives from conception to completion.

Course Methodology:

The training methodology at BIG BEN Training Center is designed to be immersive, interactive, and highly practical. We believe that adult learning is most effective when it combines theoretical knowledge with hands-on application. This course utilizes a blended learning approach, featuring expert-led presentations, in-depth case study analyses of pioneering smart cities like Singapore and Barcelona, and interactive group discussions that encourage peer-to-peer learning. Participants will engage in collaborative workshops to design solutions for real-world urban scenarios, fostering critical thinking and problem-solving skills. Practical exercises and simulation activities will provide a tangible understanding of complex concepts such as urban data analytics and digital twin modeling. Our instructors facilitate a dynamic learning environment where participants are encouraged to share their unique experiences and challenges. Continuous feedback is a cornerstone of our approach, ensuring that each participant can track their progress and master the course objectives. The program culminates in a capstone project where teams develop a comprehensive smart city proposal, applying the full spectrum of skills learned throughout the five days.

Course Agenda (Course Units):

Unit One: Foundations of Sustainable Urbanism and Smart Cities

- Introduction to Sustainable Urban Development Goals (SDGs).
- The Evolution of Cities and Contemporary Urban Challenges.
- Core Principles of Smart City Frameworks.
- The Intersection of Sustainability and Technology in Urban Planning.
- Key Performance Indicators (KPIs) for Smart and Sustainable Cities.
- Ethical Considerations and Social Equity in Urban Development.
- Global Case Studies of Successful Sustainable Cities.

Unit Two: Technologies and Infrastructure for Smart Cities

- The Role of the Internet of Things (IoT) in Urban Environments.
- Big Data Analytics and Predictive Modeling for Urban Services.
- Digital Twins and Urban Simulation Technologies.
- Smart Grids and Renewable Energy Integration.
- Intelligent Transportation Systems (ITS) and Infrastructure.
- Smart Buildings and Green Construction Standards.
- 5G Connectivity and its Impact on Urban Infrastructure.

Unit Three: Smart Governance, Policy, and Citizen Engagement

- Frameworks for E-Governance and Digital Public Services.
- Data Privacy, Security, and Governance in Smart Cities.
- Open Data Platforms and Fostering Urban Innovation.
- Strategies for Effective Citizen Participation and Co-creation.
- Developing Public Policy for Smart City Initiatives.
- Public-Private Partnership (PPP) Models for Urban Projects.
- Regulatory Challenges and Solutions in Smart City Deployment.

Unit Four: Sector-Specific Smart City Applications

- Smart Mobility and Mobility-as-a-Service (MaaS).
- Intelligent Waste Management and Circular Economy Principles.
- Smart Water Management and Conservation Systems.
- Public Safety and Emergency Response Technologies.
- Smart Health and Wellbeing in Urban Settings.
- Sustainable Tourism and Smart Destination Management.
- Urban Agriculture and Smart Food Systems.

Unit Five: Planning, Financing, and Implementing Smart City Projects

- Strategic Planning and Roadmap Development for Smart Cities.
- Project Management Methodologies for Urban Tech Initiatives.
- Financing Models, Grants, and Investment Strategies.
- Risk Assessment and Mitigation in Large-Scale Urban Projects.
- Measuring the Impact and Return on Investment (ROI) of Smart City Initiatives.
- Future Trends: AI, Blockchain, and the Future of Urbanism.
- Capstone Project: Developing a Smart City Implementation Plan.

FAQ:

Qualifications required for registering to this course?

There are no requirements.

How long is each daily session, and what is the total number of training hours for the course?

This training course spans five days, with daily sessions ranging between 4 to 5 hours, including breaks and interactive activities, bringing the total duration to 20 - 25 training hours.

Something to think about:

As cities become smarter and more data-driven, how can we ensure that technological advancements promote social equity and inclusivity rather than exacerbating existing urban divides?

What unique qualities does this course offer compared to other courses?

This course distinguishes itself by offering a holistic and integrated perspective that transcends a purely technological focus. While many programs concentrate on the "smart" components, our curriculum is built on the foundational principle that technology is a tool to achieve the ultimate goal of sustainable, equitable, and human-centric urban environments. We delve deeply into the critical intersection of policy, governance, finance, and community engagement, providing participants with a comprehensive understanding of the entire smart city ecosystem. The curriculum is uniquely structured to bridge the gap between theory and practice, using real-world case studies and hands-on workshops that challenge participants to solve complex urban problems. Rather than simply listing technologies, we explore their strategic application in diverse sectors like mobility, energy, and public safety. Furthermore, the course places a strong emphasis on the ethical dimensions of smart city development, including data privacy and social equity, preparing leaders to build cities that are not only efficient but also just and inclusive for all residents. This multi-faceted approach ensures participants leave not just as technologists, but as strategic urban visionaries.