Regional Planning Systems Training Course

Professional Development Training Course Outline

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

Course Introduction

Regional Planning Systems (RPS) are at the core of modern sustainable development, integrating GIS technology, spatial data analytics, smart city planning, and data-driven governance to optimize land use, infrastructure development, and resource allocation. Regional Planning Systems Training Course is designed to equip participants with advanced competencies in urban-regional planning, geospatial intelligence, infrastructure modeling, and sustainable development frameworks, enabling them to respond effectively to rapid urbanization, climate change challenges, and socio-economic transformation.

In today's era of smart cities, digital transformation, and AI-powered spatial planning systems, Regional Planning Systems play a crucial role in shaping resilient, inclusive, and efficient regions. This course emphasizes practical applications of remote sensing, spatial decision support systems (SDSS), urban simulation models, and policy integration tools to enhance evidence-based planning and governance across metropolitan, peri-urban, and rural landscapes.

Programme Curriculum

Regional Planning Systems Training Course

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Course Duration

5 days

Course Objectives

1. Understand principles of Regional Planning Systems (RPS) and spatial governance
2. Apply GIS and Remote Sensing technologies in regional analysis
3. Develop skills in urban growth modeling and land-use planning
4. Integrate Smart City frameworks into regional development strategies
5. Use Spatial Decision Support Systems (SDSS) for policy formulation
6. Analyze population distribution and demographic trends using spatial data
7. Design sustainable transportation and infrastructure networks
8. Evaluate environmental impact using geospatial analytics tools
9. Apply climate-resilient planning approaches in regional systems
10. Interpret big data for urban and regional forecasting
11. Strengthen capacity in digital twin and 3D city modeling
12. Support evidence-based public policy and governance systems
13. Implement integrated regional development strategies and monitoring systems

Target Audience

1. Urban and Regional Planners
2. Government Policy Makers and Administrators
3. GIS Analysts and Geospatial Engineers
4. Environmental and Sustainability Experts
5. Infrastructure Development Consultants
6. Smart City Project Managers
7. Academic Researchers in Urban Studies
8. NGO and Development Organization Officers

Course Modules

Module 1: Fundamentals of Regional Planning Systems

- Concepts of regional development and spatial planning
- Role of governance in regional systems
- Planning hierarchy: local to national levels
- Introduction to GIS in planning
- Case Study: Integrated regional planning in the Rotterdam Metropolitan Area

Module 2: GIS and Remote Sensing Applications

- GIS data collection and mapping techniques
- Satellite imagery interpretation
- Spatial data layers and overlays

- Land use classification systems
- Case Study: Urban expansion monitoring in Nairobi Metropolitan Region

Module 3: Smart Cities and Digital Transformation

- Smart city ecosystem architecture
- IoT integration in urban planning
- Data-driven governance models
- Digital infrastructure planning
- Case Study: Singapore Smart Nation Initiative

Module 4: Spatial Decision Support Systems (SDSS)

- SDSS framework and components
- Multi-criteria decision analysis (MCDA)
- Scenario simulation techniques
- Policy optimization tools
- Case Study: Flood risk management in Jakarta

Module 5: Urban Growth and Land Use Planning

- Urban sprawl analysis techniques
- Zoning regulations and policies
- Land suitability analysis
- Growth prediction models
- Case Study: Urban sprawl management in London

Module 6: Infrastructure and Transportation Planning

- Transport network modeling
- Accessibility and mobility analysis
- Infrastructure demand forecasting
- Integrated transport-land use planning
- Case Study: Transit-oriented development in Tokyo

Module 7: Environmental and Climate-Resilient Planning

- Climate adaptation strategies
- Environmental impact assessments (EIA)
- Green infrastructure planning
- Disaster risk reduction frameworks
- Case Study: Coastal resilience planning in Miami

Module 8: Advanced Regional Modeling and Digital Twins

- 3D city modeling and visualization
- Digital twin technology in planning
- Predictive analytics in regional systems
- Big data integration for planning
- Case Study: Digital twin implementation in Helsinki

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 Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

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

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