GIS for Urban Planning

Value Addition | Offline/Online

Duration: 80 Hours

GIS | GNSS | Remote Sensing | LiDAR

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KHAGOLAM
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Course Information

Course Title: **Geospatial Technologies for Urban Planning**
Duration: **80 Hours**
Training Modes: **Offline/Online/Hybrid |Full Time/Part-time**
Timing**: Min 3 hours/day | Max 8 hours/day**

Course Eligibility

- Knowledge of computers.
- Should know mapping concepts.
- Domain knowledge of urban planning.
- Students and graduates in Urban, Regional or Town Planning, Urban Design.

Fee

27,000 INR, for resident Nationals of India, Nepal, Bhutan, Bangladesh, Sri Lanka and Maldives, & Myanmar.

750 USD, For Non-Residents of India

INSTALMENTS: 5,000 on registration
22,000 - before course start

Software's	**Technologies**
1. ArcGIS Pro 2. GPS/GNSS	1. GIS 2. GNSS/DGNSS 3. Remote Sensing 4. LiDAR

Overview

Consultants and Government town and country planning department started following best practices with GIS, GPS, Remote Sensing, LiDAR and advance surveying technologies like Total Station Surveying, Drone Surveying to speed up planning process. New smart city reforms heavily employ and relies these technologies. Having skills and competence on these technologies increase job/ employment value of Urban Planning professionals. Earth environment is a single, vast interdependent system.

We cannot make demands on the environment in one part of the world without creating consequences in another. Earth's increasingly complex environmental challenge demand increasingly sophisticated solutions. Geographic information system (GIS) is one solution to humanity's need to better manage. These technologies are employed in project like DILRMP and NUIS.

In this training class, you will learn about GIS, GIS Data sources, GIS Analysis, Terrain analysis concepts from perception of urban planners. Along with real implementation examples in India, hands-on practical exercise exposure of Urban Planning/Design Life Cycle. This contains projections and coordinate systems transformation, geo-referencing, digitization, and topology, map layout of human settlements /planning, compilation of data from various urban data sources like Total Station, GPS, and LiDAR. Advance analytical technics cover geo-coding, table join and relates, geostatistical analysis, overlay analysis, surface interpolation methods and data exploration technics of urban environment parameters, thematic map preparation. Remote Sensing includes LULC (Land Use Land Cover) image classification technics, information on free sources of remote sense satellite data and DEM, construct DEM using LiDAR data like .las files. You will create visualise 3D GIS data, topographic maps and existing planning maps of ELU (Existing Land Use), PLU (Proposed Land Use), revenue, cadastral and land parcel maps. Course also demonstrate specially emphasis on urban and environmental case studies for betting design and vision. Concepts presented in lecture will be put into practice through hands-on laboratory exercises utilizing the GIS software.

You will learn to

1. Understand Map concepts, how GIS works, technical terms in GIS, common task in GIS
2. Describe types of data model and its uses, difference between vector and raster, consideration of scale and generalization
3. Give example on analysis unit and aggregation considerations
4. Explain types of coordinate system, and their need
5. Explain types of maps and their comparison, appropriateness to map variables for different application
6. Describe use of thematic maps in planning and decision making
7. Explain types of measurement scale and difference among them, use of scale specific theme

8. Describe kinds of classification terms and data exploration terms
9. Explain related geo-technologies like GPS, LiDAR, and Remote Sensing etc.
10. Understand 3D mapping, mobile mapping and its advantage
11. Understand map elements and consideration for effective map composition
12. Understand database tables, importing exporting data from spreadsheets, text files etc.
13. Describe SQL querying language, and compose conditional quires
14. Understand joining of the data based on a unique field, view statistics and groping data tables
15. Explain procedure of geo-referencing, digitization and errors occurs while digitization
16. Understand GIS data sources and formats from local, state and central government
17. Define point to consider for data appropriateness, analyze the relevance and quality of the data, importance of metadata,
18. Describe type of analysis can be perform in GIS, functions and their input, outputs
19. Give example on how GIS can be used for problem solving
20. Describe methods of Surface interpolation and its applications
21. Perform above GIS tasks such as data modeling, geo-database creation, visualization, digitization, map clean up, topology, geo-referencing, data linking, Symbology, geo- processing, overlay analysis and map composition in most popular GIS packages like ArcGIS Desktop or Quantum GIS

Case Studies Demonstrated on (any two):

1. Case Studies Demonstrated on (any two):
2. Biodiversity
3. Pollution
4. Coastal Zone Management
5. Wetlands
6. Change Detection
7. Urban forest management
8. Wildlife management
9. Public Policy and regulation

How to Apply

Step 1: register at: https://www.khagolam.com/home/register
Step 2: Check mail for course & bank details
Step 3: Transfer payment & share transaction receipt on What's App
Step 4: You will receive registration confirmation, by SMS/Call/Whats App.

REGISTRATION SHALL CLOSE 4 DAYS BEFORE THE START DATE. SPOT REGISTRATIONS ARE NOT ALLOWED.

FAQ's:

Q: Does fees include accommodation and food?
A: No. but we can help you to get the nearest accommodation.

Why Khagolam:

- Specialize institute for geospatial technologies
- Job oriented curriculum
- Comprehensive training material
- 100% placement assistance
- Professional Trainers
- Exposure to live projects
- Flexible timings
- Exposure to 3D GIS
- Practice, aptitude and interview rounds
- e-library facility

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Be in touch @