



GEO SPATIAL ANALYSIS IN URBAN PLANNING

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IIT Kharagpur

TYPE OF COURSE : New | Core | PG

COURSE DURATION : 4 weeks (27 Jan' 20 - 21 Feb' 20)

EXAM DATE : 29 Mar 2020

PRE-REQUISITES : Nil

INTENDED AUDIENCE : City Planning; Urban Planning; Regional Planning; Architecture

COURSE OUTLINE :

The objective of this course is to teach the theory and process of spatial relationships as applied to urban form and the development and analysis of urban environments using geographic information systems and spatial analysis techniques such as spatial statistical modeling.

ABOUT INSTRUCTOR :

Prof. Paul has completed Graduation in Architecture and Post Graduation in Planning and has been involved in research and teaching in the field of sustainable design strategies both at UG and PG level. His research interests include the use of spatial analysis methods and geographic information system.

COURSE PLAN :

Week 1: Introduction to Geographic Information System and Geographic Distribution - Analyzing Patterns using Spatial Statistics

Week 2: GIS functionality and spatial analysis in the urban planning – GIS applications and, in combination with introductory statistics, resource allocation in space. Specific applications shall include network analysis, retail site-suitability, spatial housing market analysis, and predictive modeling.

Week 3: Modeling Geographical Space – raster-based analysis related to proximity, density and interspersion

Week 4: Modeling Spatial Relationships – Ordinary Least Squares Regression, Exploratory Regression, Geographically Weighted Regression