

Category: Multidisciplinary (FYUGP)

Course Code: DPG101MD	L	T	P	S	Credits
Course Name: Exploring Neighbourhood with Space Technology	1	1	1	0	3
Course Objectives: This course introduces students to the innovative use of space technology in exploring and understanding neighbourhoods. Through a combination of theoretical discussions, case studies, and hands-on projects, students will gain a comprehensive understanding of how space technology, including satellite imagery, remote sensing, and geographic information systems (GIS), can be leveraged to analyse, monitor, and improve neighbourhoods.					
Course Outcomes: By the end of the course, students will be able to: - Understand the principles of space technology and its applications in analysing neighbourhoods. - Analyse neighbourhood characteristics and dynamics using satellite imagery and remote sensing data. - Apply Geographic Information Systems (GIS) techniques to map and visualize neighbourhood features and changes. - Evaluate the role of space technology in urban planning, community development, and environmental monitoring.					
Course Contents: Module I: Introduction to Space Technology Overview of space technology: remote sensing, satellites, GIS; remote sensing; Interpretation and analysis of satellite imagery for neighbourhood exploration; Introduce available satellite data for processing and analysis.					
Module II: GIS for Neighbourhood Analysis Mapping neighbourhood features and dynamics using GIS; Overview of GIS Softwares (QGIS); Google Earth and its capabilities; Mobile & WebGIS; Data collection using GPS; Introduce students to different case studies, identify gaps, challenges & opportunities.					
Module III: Social Equity and Neighbourhood Analysis Exploring social equity issues through space technology; Analysing spatial patterns of inequality and access to resources; Analysing demographic, socioeconomic, and environmental factors; Introduce available socioeconomic data for processing & analysis, identify gaps, challenges & opportunities.					
Book/Resources - Concepts and Techniques of Geographic Information Systems. C. P. Lo, Albert K. W. Yeung - Remote Sensing and Image Interpretation, 7th Edition. Thomas Lillesand, Ralph W. Kiefer, Jonathan Chipman					