

About the course

This course familiarizes learners with the principles of geospatial data acquisition and visualization using open-source platforms. Principal subjects include the retrieval of raster data (DEM, LISS III) from BHUVAN, high-resolution datasets such as SRTM-DEM, and vector data sourced from the Survey of India and DIVA-GIS. Students will acquire foundational knowledge in remote sensing, satellite imagery analysis, and the creation of True Color and False Color Composites.

Practical workshops emphasize using platforms such as USGS Earth Explorer for the depiction of elevation data and the integration of theme information for spatial analysis.

Learning Objectives

- Download geographic data from open-source systems like BHUVAN, USGS Earth Explorer, and DIVA-GIS.
- Learn to understand DEM, LISS III, and SRTM-DEM raster datasets.
- Use Survey of India and DIVA-GIS vector datasets.
- Analyze satellite images using remote sensing.
- Visualize True Color and False Color Composites using satellite data.
- View terrain and elevation using digital elevation models.
- Basic analysis and mapping using theme and geographical information.
- Use geographic data portals and visualization tools step-by-step.

Target Audience

- Students in geography, environmental science, and GIS
- Early-career GIS professionals
- Researchers and planners using spatial data
- NGO and government staff involved in mapping and resource planning
- Anyone interested in open geospatial tools

Course Duration – 4-6 Hours

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Course Name - Introduction to Spatial Data -Data Download & Data Visualization

Module 1 - BHUVAN Portal

- DEM
- LISS III
- Thematic Datasets

Module 2 – High Resolution Dataset from Earth

- Digital Elevation Model (SRTM-DEM)
- Remote Sensing

Module 3 – Vector Dataset

- Survey of India
- DIVA-GIS

Module 4 – Data Visualization - Elevation Dataset (SRTM)

- Interface of USGS
- Steps to use USGS dataset

Module 5 - Data Visualization - Satellite Imagery

- DEM
- True Color Composite and
- False Color Composite