Vice Chancellor's Message

Agricultu



### Prof. Shakil Ahmad Romshoo

I am pleased to announce that IUST has recently launched a 4-year Bachelor's program in Geospatial Technology, along with a Minor program in Space Technology. Geomatics integrates various technologies —such as remote sensing, GIS, GPS, and computer sciences. The program aims to enhance students' technical skills in applying geospatial technologies to address pressing environmental, social, and economic challenges. The curriculum is aligned with the latest trends in geospatial science and emphasizes practical applications in a wide range of fields through hands-on exercises, case studies, and an independent dissertation. Given the anticipated demand for Geomatics professionals in India by 2030, it is essential to equip our students with the necessary knowledge and skills in this field to meet industry needs.

## About Us

The Department of Planning & Geomatics offers interdisciplinary education in geospatial sciences. We aim to empower students with skills to tackle complex challenges through research, innovation, and collaboration with academia, industry, and government. From advancing spatial analysis techniques to fostering collaboration between academia, industry, and government, our goal is to develop solutions that promote sustainable development and improve the quality of life for all.

### Vision

To excel in geospatial and planning sciences for societal benefit through knowledge transfer, innovation, and core competence in emerging frontiers.

## **Mission**

- Apply advanced spatial analysis to tackle complex socio-economic, environmental, and governance challenges.
- Strengthen collaboration among academia, industry, and government.
- Promote research in GIS, remote sensing, and data analytics.
- Drive innovation in geospatial technologies to support evidence-based decision-making for sustainable urban and rural development.
- Equip students with practical skills, critical thinking, and ethical values to address global challenges and shape a sustainable future.



# Department of Planning & Geomatics



Empowering the Future with Geospatial Technology



# Why Choose Geospatial Technology?

### **Cutting-Edge Curriculum**

Dive into core subjects like GIS, Remote Sensing, Spatial Data Analysis, and Big Data with real-world applications.



### **Hands-On Experience**

Learn by doing — through labs, field studies, internships, and an independent capstone project.



#### **Strategic Collaborations**

Gain exposure through partnerships with institutions like ISRO, ensuring alignment with the latest tech and research.

### **Career-Driven Pathways**

Prepare for careers in urban planning, environmental monitoring, disaster management, agriculture, and more.

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# Program Structure

#### **Core Modules:**

- Geographic Information Systems (GIS)
- Remote Sensing & I
- Cartography & Spatial Data Analysis
- Geospatial Database Design
- Geospatial Spatial Modelling
- Big Data Analytics
- Al in Geospatial

### Minors in:

- Data Sciences
- Artificial Intelligence
- Disaster Risk Reduction
- Climate Change & Sustainability

#### Capstone:

- Final Year Project/Dissertation
- Field Training & Industry Internship

## **Program Highlights**

### 🦂 Industry-Relevant Skills

Aligned with India's growing geospatial economy and global standards.

### 🔬 Research-Driven Environment

Access to active research projects in climate change, glacier dynamics, and spatial modelling.

### 🛞 Innovative Curriculum

Blending science, technology, and societal impact - empowering students to solve real-world challenges.



# FYUGP in Geospatial Technology

The FYUGP in Geospatial Technology is an interdisciplinary program crafted to develop spatial scientists and problem-solvers ready to shape the future through technology, data, and planning. Rooted in the latest developments in geoinformatics, this program blends theory, technology, and fieldwork, preparing students for impactful careers across sectors.

### Program Overview

Duration: 4 Years | Credits: 160 Eligibility: 10+2

This program offers **multiple exit options,** aligning with the flexible structure of NEP. Students may earn a Certificate, Diploma, or Bachelor's Degree with Honours, depending on the number of years completed.