

**PROFESSIONAL ELECTIVE COURSES (PEC):
VERTICALS**

VERTICAL I (Surveying & Mapping)	VERTICAL II (Geospatial Data Analytics)	VERTICAL III (Image Processing and Analysis)	VERTICAL IV (GeoSpatial Applications)	VERTICAL V (Geodesy)	VERTICAL VI (Geo-Intelligence)
Terrestrial and Satellite Photogrammetry	GIS Customization and Scripting	Soft Computing Techniques	Environmental Geoinformatics	Advanced Geodesy	Digital Twins & BIM
GNSS Surveying	Location Based Geospatial Services	Polarimetry and Interferometry	Transportation Geomatics	Satellite Geodesy	Big Data Analytics for Geomatics
Terrestrial and Bathymetric Laser Scanning	Space Syntax	Pattern Recognition	Geomatics for Hydrology and Water Resources	Physical Geodesy	IoT Applications in Geomatics
Unmanned Aerial System (UAS) for Large Scale mapping	GIS based Utility and Asset Management	Raster Data Modelling	Geomatics for Disaster and Risk Mitigation	Geodetic Interferometry	Decision Support Systems for Geomatics
Underground and Hydrographic Surveying	GeoSpatial Modeling & Simulation	Agriculture and Forest Management using Geomatics	Satellite Meteorology	Geodetic Control Survey and Adjustment	Location Intelligence & Surveillance
Cadastral Surveying	Sustainable Development Goals and Geomatics	Spatial Statistics	Geomatics for ocean and Coastal Applications	Geodetic Astronomy	Geomatics for Smart Cities

Registration of Professional Elective Courses from Verticals:

Professional Elective Courses will be registered from Semesters V to VII. These courses are listed in groups called verticals that represent a particular area of specialisation / diversified group. Students are permitted to choose all the Professional Electives from a particular vertical or from different verticals. Further, only one Professional Elective course shall be chosen in a semester horizontally (row-wise). However, more than one course is permitted from the same row, provided each course is enrolled in different semester.

The registration of courses for B.E./B.Tech (Hons) shall be done from Semester V to VIII. The procedure for registration of courses explained above shall be followed for the courses of B.E./B.Tech (Hons) also. For more details on B.E./B.Tech (Hons) refer to the Regulations 2023, Clause 4.11.

GEODESY (VERTICAL- V)

S. NO.	COURSE CODE	COURSE TITLE	CATE- GORY	PERIODS PER WEEK			TOTAL CONTAC T PERIODS	CREDITS
				L	T	P		
1	GI23021	Advanced Geodesy	PEC	3	0	0	3	3
2	GI23022	Satellite Geodesy	PEC	3	0	0	3	3
3	GI23023	Physical Geodesy	PEC	3	0	0	3	3
4	GI23024	Geodetic Interferometry	PEC	3	0	0	3	3
5	GI23025	Geodetic Control Survey and Adjustment	PEC	3	0	0	3	3
6	GI23026	Geodetic Astronomy	PEC	3	0	0	3	3