FUNDAMENTAL OF GEOGRAPHIC INFORMATION SYSTEM

Sections	Course	Description	Goals
1	Introduction to Geographic Information System (GIS)	-Overview of Geographical Information System (GIS) -Historical evolution of GIS -Components of GIS -GIS data Types -GIS data formats -Real-life Applications of GIS -Career Opportunities in GIS	Build a solid understanding of GIS and location intelligence
2	Setting Up your GIS software	- Introduction to Geospatial softwares -Overview of Open Sources(Qgis) and Commercial Software (Arcmap/ArcGIS Pro) - Navigating through software Interfaces - Setting up a project workspace	Successful installation of all GIS softwares
3	Coordinate system and Georeferencing in GIS	-Coordinate system essentials -Understanding projections -Importance of Coordinate Systems in Locational Data Collection Georeferencing -Definition of Georeferencing -Assignment	Proficiency in collecting and converting GIS data from different sources

4	Basic Geoprocessing tools	-Definition and importance of Geoprocessing tools
		-Overview of geoprocessing tools
		   Clip
		   Merge
		   Dissolve
		-Assignment
			Application of these tools in practical situations

5	Querying in GIS	-Understanding querying in GIS and its relevance
		-Types of Queries in GIS
		   Attribute Queries
		   Spatial Queries
		-Applications of spatial Queries
		-Assignment
			Master the skill of swiftly understanding data through efficient and straightforward queries

6	Cartography and map design	-Concept of cartography
		-Role and types of Maps:
		   Physical Maps
		   Political Maps
		   Thematic Maps
		-Introduction to Cartographic elements
		   Data Styling
		   Colouration technique
		  Classification methods
		-Crafting your first map
		-Assignment
			Ability to create maps that can be easily shared by organizing and transforming raw data.