

Course Content for Job Oriented Advance Geospatial Science & Its Implementation

Paper	Topic	Day
Geographical Information Systems	<i>Overview of GIS:</i> Introduction to GIS, definition of GIS, Components of GIS, functions and advantages of GIS, planning and management, Application Areas	Day 1
	<i>Spatial data model:</i> Dimensions of GIS data, Conceptual (field/object) and logical (raster/vector/object oriented)	
	<i>Process of GIS:</i> Data sources, data capture (raster/vector/attribute), Raster and vector data processing	
	GPS (NAVSTAR) Technology: Introduction, concept of NAVSTAR technology,	Day 1
	<i>Advanced GIS:</i> database to knowledge base approach, metadata standards, concept of geodatabase, advanced GIS data types, modern trends	
	<i>GIS using Q GIS:</i>	Day 1
	<i>i) Introduction to Q GIS Software</i>	
	<i>ii) Image Georeferencing (image to image, image to ground), metadata editing, projection</i>	
	<i>iii) Geodatabase design, vector (generation/editing)</i>	Day 2
	<i>iv) Add XY data, external data attachment, create relationship, query</i>	
	<i>v) Thematic map, annotation, layout</i>	
	<i>Advanced geospatial analysis:</i> Overlay operations, geocoding, network analysis	
<i>GIS using ArcGIS:</i> Geoprocessing and workflow model		