# GLOBAL GIS & RS LEARNING CENTER

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Course Duration	Class Timing	Course Price
10 months [2 days/week]	Theory classes: 1.30 hrs each;	6000/-
	Practical classes: 2 hrs each	

#### Syllabus:

#### Topics (GIS):

- 1. Introduction to GIS, definition of GIS, Components of GIS, functions and advantages of GIS.
- **2.** Spatial data model and process of GIS: Dimensions of GIS data, Conceptual (field/object) and logical (raster/vector/object oriented), Data sources, data capture (raster/vector/attribute), Raster and vector data processing.
- **3.** Arc-GIS Interface & plugins concepts, raster styling, Georeferencing image to image and image to ground.
- **4.** Digitization, Vector data creation, editing, and manipulation, attribute creation and data entering, import/export shapefile to kml.
- **5.** Classification: Supervised & Unsupervised(landuse and land cover), image interpretation.
- **6.** Different type of ArcGIS Tools, Overlay analysis, buffer preparation.
- **7.** Different types of network analysis, Different types of project preparation, map layout preparation.
- **8.** Convert CSV/excel file to vector layer, coordinate extraction, join external excel file with vector layer, coordinate transformation etc.

## Syllabus:

## **Topics** (Remote Sensing):

- 1. Concept on remote sensing, platforms and sensor characteristics, remote sensing platforms, passive/active, orbits, swath, nadir, sensor resolutions
- **2.** Erdas-Imagine Geo-referencing image to image and image to ground, Supervised & Unsupervised(landuse and land cover), image interpretation

# Syllabus:

## Topics (Google Earth):

- 1. Concept on Google Earth, different tools are uses of Google Earth.
- 2. Created point, Line and close polygon AOI.
- 3. GPS points rectified the Google Earth and Created Survey data and modified the Survey Data,
- 4. Created .kml and .kmz file.

# Syllabus:

# Topics (GPS):

- 1. Introduction to GPS, functions and advantages of GPS
- 2. Waypoint and track collection from GPS receivers and exporting to GIS database
- 3. Area and length calculations

Class Venue: Hooghly (Serampore), Nadia - Krishnanagar (Badkulla)