**Learning objectives -** **Remote Sensing and Image Analysis**

* acquire a thorough knowledge of remote sensing principles
* Steps and knowledge of pre-processing satellite images: Geometric, Radiometric, Atmospheric corrections
* Get familiarized with present satellite remote sensing platforms
* Geospatial data access and software
* Understand how atmospheric components can affect a signal recorded by remote sensing platforms and how to correct for them

**Exploring and integrating RS imagery**

1. Introduction of Remote Sensing and Image Analysis
* What is Remote Sensing
* Application for Remote sensing
1. Remote sensing aerospace methods.
2. Remote Sensing Resolutions
3. Remote Sensing Software and Data Access
4. The shooting system of satellite stations
5. Description of the orbits of the Earth's artificial satellites. Classification of orbits by semi-major axis.
6. The main stages of processing satellite images. Preprocessing, Thematic Processing, or Distortion Adjustment. Types of distortions. Pixel recovery, contrast adjustment. Filtering noise during shooting.

**Laboratory works**

1. Study main Software for Remote sensing and Data Access
2. Search and download satellite photos of the Internet and study their structure having the parameters for our study.
3. Perform calculations of various Perform calculations of various indexes for any part of the territory of RA or for individual districts. As an example, Normalized Difference Snow Index (NDSI)