# Satellite Image Processing (3 Credits)

001-2-4024

***Prerequisite:*** Course No.: 001-2-4004 - Introduction to Remote Sensing

| Lectures | Exercise | Laboratory | Field Trip |
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| 3 | | | |

**Objectives:**
The goal is to gain a basic understanding of digital image data and the tools required to process, analyze, and interpret satellite images. The course is both theoretical and experimental based on the ERDAS-Imagine software.

**Topics:**
1. Introduction. Satellite imagery nature. Raster and vector data.
2. ERDAS raster. Data models. Visualization. Image file formats, meta data.
3. Data levels. Image Contrast Enhancement.
4. Preprocessing: *Radiometric correction.*
5. Preprocessing: *Geometric correction.* Mosaic.
6. Image enhancement.
7. Classification (supervised and unsupervised).
8. Advanced classification.
9. Model maker.
10. Topographic analysis. Relations with GIS. Raster to vector transformation.
11. Spectral analysis and spectral analysis workstation.
12. Batch processing. Main course points.

***Lecturer:*** Natalya Panov and Arnon Karnieli

***Recommended Reading:***
John R. Jensen. 1996. Introductory Digital Image Processing: A Remote Sensing Perspective. Prentice Hall. 2nd edition, 316 pages