Lab Title: " Laboratory of Geoinformatics"

Responsible: Dr., Ioannis Faraslis

Characterization: Educational/Research

Courses taught:

(a) Geoinformatics (GIS) & Spatial Analysis Methods,

(b) Photointerpretation-Remote Sensing.

Subject of research:

Use of Remote Sensing and Geographic Information Systems, sciences, in the detection, analysis and monitoring of phenomena related to space. Emphasis is placed on the study of environmental problems, on the mapping/monitoring of land use cover changes, on spatial analysis methods as well as on the support of area management and development actions (water pollution, land cover/use changes, erosion, etc.). To realize the above, cutting-edge technologies and their derivatives are used such as: satellite data, ultra-high spatial resolution aerial photographs from UAVs, 3D interactive models in a GIS environment (3D-GIS).

Specialization and services offered:

Recording, monitoring, study and analysis of environmental variables and recording of temporal changes from satellite - UAV data, in particular,

(a) Monitoring of physicochemical parameters (e.g. chlorophyll-a) of aquatic ecosystems (lakes),

(b) monitoring changes in vegetation biomass (vegetation indices);

(c) identification and demarcation of burned areas,

(d) land use/cover mapping, etc

- Creation of ultra-high resolution orthophoto maps as well as Digital Surface Model (DSM) from Unmanned Aerial Vehicles (UAV).

- Development of multi-criteria models and spatial analyzes to solve problems (e.g. suitability zones for the siting of Photovoltaic Parks).

- Creation of thematic maps at various scales.