UAV LiDAR Survey Training

includes UAV European Pilot Training

Practical training course on performing laser scanning using UAV LiDAR systems and processing data to create point clouds, DEM models and GIS products.

Duration: 5 Days

Delivery: In Person

Cost: POA

Spaces: 8 (*max)

Training Format: Field and computer exercises

Software: DJI Terra, QGIS or equivalent tools

Training Level: Foundation to intermediate

OVERVIEW

The UAV LiDAR Survey and DEM Generation Training course introduces participants to the practical use of UAV-mounted LiDAR systems for topographic mapping and terrain modelling. The course focuses on the full workflow, from mission planning and data acquisition to point-cloud processing, classification and generation of digital elevation models.

Participants will learn how UAV LiDAR systems collect 3D data, how flight parameters influence point density and data quality, and how to process raw LiDAR datasets into useful geospatial products. The training includes practical work with LiDAR point clouds, ground classification, noise filtering, DEM creation and export of GIS-ready outputs.

The course is designed for users who want to apply UAV LiDAR in environmental monitoring, coastal mapping, forestry, engineering, archaeology, infrastructure inspection, floodplain mapping or terrain analysis.

WHAT WILL BE COVERED?

The course will be delivered through a combination of field training and computer-based sessions and will cover

- Introduction to UAV LiDAR systems
- Principles of laser scanning
- UAV LiDAR versus photogrammetry
- Mission planning for LiDAR surveys
- Flight altitude, speed, overlap and scan angle
- GNSS/IMU integration and trajectory data
- Ground control and check points
- Data acquisition workflow
- Introduction to DJI Terra
- Point-cloud generation and visualisation
- Point-cloud cleaning and filtering
- Ground classification
- Creation of DEM, DSM and point-cloud products
- Export of LAS/LAZ, GeoTIFF and GIS-ready files
- Quality control of LiDAR datasets
- Visualisation of LiDAR outputs in GIS

ENTRY REQUIREMENTS

- Basic knowledge of UAV
- Previous experience with GIS

WHO SHOULD STUDY?

This course is suitable for people who want to collect, process or analyse UAV LiDAR data.

It is designed for:

- UAV operators
- GIS specialists
- Surveyors
- Coastal and river researchers
- Engineering and infrastructure teams
- Forestry and landscape analysts
- Students and researchers