

## Study Programme

### First year

#### First term (in class or online)

- EARTH OBSERVATION ANALYSIS
- SATELLITE MULTI/HYPERSPECTRAL DATA ANALYSIS FOR ENVIRONMENTAL INSIGHTS
- GEOSPATIAL TECHNOLOGIES AND APPLICATIONS
- COMPUTER SCIENCE AND INTELLIGENT SYSTEMS
- SPATIAL ANALYSIS AND GEOPROCESSING WITH ESRI SOFTWARE

#### Second term (in class)

- SEDIMENTARY ENVIRONMENTS
- MARINE GEOLOGY
- GLOBAL CHANGES
- EARTH OBSERVATION MULTI THEMATIC APPLICATIONS
- COMPARATIVE SEDIMENTOLOGY
- DIGITAL FIELD MAPPING WITH EMERGING TECHNOLOGIES
- CLOSE RANGE PHOTOGRAMMETRY AND 3D LASER SCANNING

### Second year

#### Third term (in class or online)

- EARTHQUAKE GEOLOGY AND TECTONIC DEFORMATION THROUGH EARTH OBSERVATION DATA
- VOLCANO GEOLOGY AND ERUPTION MONITORING THROUGH EARTH OBSERVATION DATA
- SLOPE STABILITY AND LANDSLIDE MONITORING

#### Fourth term

- MASTER THESIS
- STAGES ABROAD / INTERNSHIP

## THE EARTH OBSERVATION CURRICULUM

This LM-74 curriculum in Earth Observation (EO) is a **highly professional and future-oriented training programme**, positioned at the crossroads of geosciences, digital technologies and the rapidly expanding **Space Economy**.

Earth Observation is now a strategic sector worldwide: in 2023 the EO market surpassed **€5 billion**, with projected **double-digit growth** over the next decade. Its applications are essential for **climate change assessment, natural hazard monitoring, environmental protection, coastal and marine management, precision agriculture, land planning and energy transition**.

Within this context, the curriculum provides advanced skills in:

- analysis of multispectral, hyperspectral and radar data;
- satellite remote sensing;
- GIS and geospatial technologies;
- digital field mapping and 3D modelling;
- numerical methods for environmental and geological processes.

The programme forms **Earth Observation professionals and next-generation geologists**, ready to work in:

- space and geospatial companies,
- Earth Observation service providers,
- environmental and civil protection agencies,
- research centres and space missions,
- public institutions and private industries using satellite data.

A modern LM-74 designed to equip students with the competencies required in one of the world's most innovative and fast-evolving technological fields.



*Useful Link*





*An advanced and highly professionalizing LM-74 programme designed to train the next generation of Earth Observation specialists and future geologists. Integrating geospatial, environmental and satellite-based technologies, the programme prepares students to operate in the fast-growing Space Economy.*

### Key information



Duration  
2 years



Minimum entry requirement  
Bachelor's Degree



Language  
English



Learning mode  
Blended learning  
(online and in-class)



Università degli studi "G. d'Annunzio"  
Dipartimento INGEO



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IRSPS



International  
Master's Degree  
in Planetary Sciences

Curriculum  
Earth Observation