



**L-Università
ta' Malta**

Master of Science in Geosciences

Course overview:

Research Areas

Seismology and Geophysics

- Mediterranean seismicity, seismic networks and earthquake location
- Mediterranean geodynamics and crustal structure; use of regional ambient noise
- Seismic site response studies using ambient noise and earthquake data
- Geophysical investigation of subsurface
- Historical seismicity, seismic hazard studies, attenuation relations
- Earthquake source studies
- Seismic data processing and interpretation

Marine Geology

- Marine geomorphology, submarine canyons and gullies, submerged palaeolandscapes
- Submarine landslides and marine geohazards
- Continental shelf dynamics
- Fluid flow processes
- Carbonate escarpments
- Seafloor and habitat mapping
- Seafloor surveying technology, geomorphometry and GIS
- Experimental geomorphology

Atmospheric and Climate Studies

- Validation of Numerical Weather prediction model and applications to Etna emissions.
- Analysis of data from Tracerlab Radon monitor in the Central Mediterranean.

- Analysis of greenhouse gas and ozone trends in the Central Mediterranean.
- Study of 3D Ultrasonic anemometer data at Giordan Lighthouse.
- Study of shipping in the Gozo - Sicily channel.
- Indoor and outdoor air quality monitoring and modelling.

Physical Oceanography

- Hydrodynamics of the sea in the vicinity of the Maltese Islands at shelf and coastal scales
- Acquisition, processing, analysis and management of high quality oceanographic observations in real time or delayed
- Oceanographic data quality control, management and archival according to international standards and formats
- Numerical modeling of the marine environment for forecasts of meteo-marine parameters, and as a tool in environmental assessments and research
- Marine Spatial Planning
- Dynamics of Jellyfish Blooms
- Monitoring of shipping impacts on the marine environment
- Ocean literacy and citizen science
- Science-policy interface and marine environmental management
- Monitoring of coastal sediments