

APPLICATION

Required qualification: Any master degree

Selection: Selection will be based on the evaluation of Curriculum; Thesis; Other publications;

Costs: 3.824,50 euro

Enrolment deadline: November 29, 2016.

See University website:

www.unipd.it/corsi/master/avvisi-selezione-master

MASTER'S STRUCTURE

Credits: 60

Available places: 40

Duration: March-December 2016 (Friday and Saturday)

Mandatory Attendance: 70%

Place: Padua, Italy



INFORMATIONS

Prof. Massimo De Marchi - Direttore Master
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www.mastergiscience.it

In partnership with FTO Remotefly is possible to benefit of the 50% of discount for the italian abilitation to be an UAV pilot.

People enrolled at the master will have a licence of ESRI ArcGIS Student Edition, for one year.



UNIVERSITÀ DEGLI STUDI DI PADOVA
MASTER
E CORSI DI PERFEZIONAMENTO E AGGIORNAMENTO



OBJECTIVES

The increasing availability of geographic information and the rapid development of new technologies for the management of geographic data (from drones, to WebGIS, to Mobile-GIS) require the updating, the reorganization and the development of decision-making processes in many sectors of the economy, public administration and the non-profit. The Master aims to prepare professionals able to: use appropriate interdisciplinary approaches, technological solutions and geographic information in addressing complex territorial issues; acquire, represent and analyze geographic information to spread expert use and to support complex decisions; manage the transformation of technologies supporting GIScience and orienting the identification of appropriate solutions for businesses, government agencies, citizenship.

TRAINING ACTIVITIES

The Master is divided into 32 credits of common courses, 10 CFU for each academic path and 18 credits of stage. There are 336 hours of lectures, 714 hours of individual study, and 450 hours of stage for a total of 1,500 hours, corresponding to 60 credits.

Much of the teaching will be carried out in a computer room and / or laptops.

The Master takes the approach of learning in the situation, alternating lectures of teachers with practical examples and immediate experimentation. There will be excursions and survey activities on the field.



COMMON COURSES

- From geography of complexity to GIScience: territories, places, landscapes and sustainability (2CFU)
- From the topographic map to the physical landscape: interpretation of geomorphology (2CFU)
- Biodiversity and ecosystem services in land planning (2CFU)
- History of cartography and the use of historical maps in Geo-historical reconstruction (2CFU)
- Between professional GPS and mobile GIS: survey and reference system for cartography (2CFU)
- GIS: structure, functions and models for territorial vector data con QGIS (2CFU)
- Raster analysis with ArcGis and QGIS-GRASS (2CFU)
- Geo Database Open Source and geospatial data structures with Postgresql / PostGIS (2CFU)
- WebGIS design and management (2CFU)
- Remote sensing: data acquisition and geological applications (2CFU)
- Remote sensing: applications in geomorphology and environmental management (2CFU)
- Remotely Piloted Aircraft Systems (RPAS), law and criteria for operations (2CFU)
- Unmanned Systems for territory and resource management (2CFU)
- Cartography and GIS in Spatial Planning (2CFU)
- Participatory GIS and methodologies for inclusive public decision making (4CFU)



PATHS

1 - Production and management of geo-information

- Digital terrain models and geomorphometry (2 CFU)
- Digital photogrammetry and structure from motion (2 CFU)
- Modern survey technology (2 CFU)
- Information Modeling and Management (IMM) for buildings (BIM) and infrastructures (IIM) (2 CFU)
- Geothematic cartography (2 CFU)

2 - GIScience for environmental conflict management and participation on public decision making

- Territories of citizens: geography and GIScience for the management of socio-environmental conflicts (3CFU)
- Digital Earth, voluntary geography and mapping of ecosystem services (3CFU)
- Mobility and Transport: quality of information and quality of decisions (2CFU)
- Landscapes social and ecological networks (2CFU)

3 - Cartography and GIS for green infrastructures

- Design of green infrastructure (2CFU)
- Geoinformation and technologies for the description of animal movement (2CFU)
- Mobility and Transport: quality of information and quality of decisions (2CFU)
- Landscapes social and ecological networks (2CFU)
- Geothematic cartography (2 CFU)

4 - Geoinformation and new technologies for sustainable agriculture

- Precision farming and unmanned systems (2CFU)
- Remote sensing for plant phenomic analysis (2CFU)
- Assessment of water and carbon budgets of crops through advanced remote sensing techniques and ground truth (2CFU)
- Spatial statistics and geostatistics for sustainable agriculture (2CFU)
- Geoinformation and technologies for the description of animal movement (2CFU)