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Master of science (MSc) in geography

GENERAL OUTLINE

Objectives

The programme offers:

- an interdisciplinary programme at the interface of Geosciences and Environmental Sciences;
- a general reflection on the organisation of territories, of technical networks and of spatial, natural and human systems on different spatial scales;
- a reflection on the transformations of urban spaces in a perspective of sustainable development: eco-urban planning, city policies, urban planning;
- a study of the natural dynamics of the Alpine environment and its evolution linked to climatic changes, socio-economic changes and territorial development;
- a critical analysis of the diversity and complexity of the socio-economic and environmental transformations of southern countries;
- an emphasis in teaching on the use of quantitative methods (Spatial Analysis, Geomatics, Geovisualisation).

Career prospects

University studies develop a great many transverse skills such as: oral and written communication, critical, analytical and summarising faculties, abilities in research, and so on.

This panoply of skills, combined with specialist knowledge acquired in the course of studies, is excellent preparation for a wide range of employment opportunities, such as:

- Town Planning departments
- Development offices
- Coordination of regional development projects
- Sustainable urban development consultancy
- Practical work in relation to the mountain environment
- Practical work in relation to development in southern countries
- Teaching

Alumni move into a wide variety of roles, for example as a sustainable development officer or coordinator of the North Lausanne Development Plan.

Other examples and alumni testimonials:
www.unil.ch/perspectives/geosciences

what planning for our territories?

GENERAL INFORMATION

Organisers

Faculty of Geosciences and Environment
School of Geosciences and Environment
www.unil.ch/gse

Degree awarded

Master of Science (MSc) in Geography, orientation:

- Sustainable Urban and Spatial Planning
- Geomorphology and Management of Mountain Regions
- Development and Environment
- Spatial Analysis and Complex Systems

ECTS credits

120

Duration

4 semesters

Teaching language

French, some courses in English. Recommended level: C1.

Contact

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More information

www.unil.ch/mastergeographie



EDUCATIONAL CONTENT

Description

The first three semesters are dedicated to training and the start of research work. Courses that are common to all specialisations take mostly place during the 1st semester.

The orientation **Urban Studies, Sustainable Urban Development and Territorial Development** is based on a study of the environmental challenges of sustainable urban development and analysis of urban projects viewed from the perspective of ecological town planning.

The **“Geomorphology and Management of Mountain Regions”** orientation, with a strong grounding in Geomorphology and a focus on the study of environmental dynamics in high mountain regions, concentrates in particular on the reaction of permafrost to climatic changes and the evolution of alpine landscapes due to the combined effects of environmental and socioeconomic changes.

The **“Development and Environment”** orientation is orientated towards the study of economic, social, political and ecological transformation in Southern countries. Development is described in rural and urban contexts, especially in Africa and Asia. Apart from the scientific analyses, training emphasises apprenticeship in the instruments used in international cooperation.

The **“Spatial Analysis and Complex Systems”** orientation concentrates on the development for challenging public and private projects of studies and smart communicative displays based on spatial modelling, the study of networks and the organisation and processing of Big Data. A mastery of the relevant concepts and tools is coupled with strategies for the creation of focused and innovative approaches.

The fourth semester is devoted essentially to writing the dissertation in the subject of the chosen orientation. The last two semesters can lead to more specific training as part of a work placement or an international placement certificate (practical training).

SYLLABUS

A. Common module (15 ECTS credits)

- Basic Concepts in Geovisualisation
- Territorial Diagnosis and Prospects
- Risk and Territorial Policies

B.1. “Sustainable Urban and Spatial Planning” orientation module (65 ECTS credits)

“Sustainable Town Planning and Urban Projects” orientation

- Territories, spatial dynamics, social practices and sustainability
- Governance: institutional framework, stakeholders and process
- Projects: strategy, design and implementation
- Optional Courses and/or Internship

B.2. “Geomorphology and Management of Mountain Regions” orientation module (65 ECTS credits)

- Preparation to Research
- Management of Mountain Regions
- Physical Processes in Mountain Regions
- Optional Courses and/or Internship

B.3. “Development and Environment” orientation module (65 ECTS credits)

- Preparation to Research
- Theoretical and Conceptual Bases of Development
- Environment and Development: Processes and Issues
- Methods and Tools
- Optional Courses and/or Internship

B.4. “Spatial Analysis and Complex Systems” orientation module (65 ECTS credits)

- Databases and Visualising Geographical Information
- Spatial Modelling, Networks and Complex Systems
- Optional Courses and/or Internship

C. Dissertation (40 ECTS credits)

Personal research work

PRACTICAL INFORMATION

Admission requirements

Candidates must be holders of a Bachelor of Science in Geosciences and Environment, subject area Geography or Environmental Sciences, awarded by the University of Lausanne, or of a Bachelor's degree in Geography or Environmental Studies awarded by a Swiss university. Another degree or academic title may be judged equivalent and give access to the Master's degree course, with or without further conditions.

Enrolment and final date

Applications to be submitted before 30 April to the Admissions Office:
www.unil.ch/immat
Candidates needing a visa to study in Switzerland: 28 February.

Start of courses

Mid-September
Academic calendar: www.unil.ch/central/calendar

Part-time Master's degree

Under certain conditions, a Master programme can be followed part-time. See www.unil.ch/formations/master-temps-partiel.

General information on studies, guidance:

www.unil.ch/soc

Career prospects

www.unil.ch/perspectives

Accommodation and financial assistance

www.unil.ch/sasme

International

www.unil.ch/international



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Faculté des géosciences
et de l'environnement