| le savoir vivant |

can the earth do without experts?

master of science (MSc) in environmental geosciences

GENERAL OUTLINE

Objectives

The Master of Science in Environmental Geosciences examines the relationship between man and his environment and its consequences. An attempt is made to analyse and understand the different aspects of this relationship and to quantify its interactions with a view, finally, to being able to propose action strategies. This involves a clear evaluation of risks and a definition of limits beyond which risks are unacceptable both for man and for nature. To implement these limits concretely within society calls for a precise evaluation of their consequences and the way in which different social groups perceive them.

Teaching on this Master's degree therefore lays emphasis on the understanding of processes and their quantification, the estimation and management of risks, and an assessment of the feasibility and efficiency of possible actions. To this end, the programme is based on six fields of competence: environmental concerns, knowledge of basic mechanisms of the environment, knowledge of dangers and hazards and their representation, data analysis, regional development, construction and management of risks and their reductions.

Career prospects

- Research Institutes
- Firms of consultants specialised in dealing with natural hazards
- Branches of the Public Administration responsible for territorial policies
- Associative movements dedicated to environmental protection
- Environmental management in companies
- Teaching

GENERAL INFORMATION

Organiser

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

Degree awarded

Master of Science (MSc) in Environmental Geosciences, subject area:

- Physical and Chemical Processes of the Environment
- Risk Analysis, Monitoring and Representation
- Environmental Social Issues

ECTS credits

120

Duration

4 semesters

Teaching language

Mainly French, with a few courses in English. The dissertation may be written in English.

Enrolment

The candidate's application must be submitted to the Admissions Department before the final date:
www.unil.ch/immat

Contact

Ms Nicole Lagrotteria
Faculté des GSE
Quartier UNIL-Mouline, Géopolis
CH–1015 Lausanne
Tel. +41 (0)21 692 35 14
Fax +41 (0)21 692 35 05
master.environnement@unil.ch

Version : April 2013
Subject to changes
Only the official texts are authentic

www.unil.ch/masters

UNIL | Université de Lausanne
Faculté des géosciences et de l'environnement

EDUCATIONAL CONTENT

Description
The common module comprises introductory courses with a cross-disciplinary dimension. Through transverse activities and teaching it gives students insight into the multidisciplinary nature of the environment.
The specialisation module allows the student to choose one of the following subject areas:
- Physical and Chemical Processes of the Environment
- Risk Analysis, Monitoring and Representation
- Environmental Social Issues.

This module includes compulsory blocks, optional blocks, and finally the possibility of a free choice of course credits.
The dissertation constitutes the final course module.

Examinations
Evaluations may take the form of written or oral examinations, practical work, discussions, field trip reports or conference organisation.

Mobility
Subject to the prior agreement of the mobility Commission, students enrolled on a Master's cycle may study for one or two semesters in an institution recognised by UNIL while continuing to be registered with the University of Lausanne.

Skills development
University studies develop, in addition to specific academic skills, a great many transverse skills such as: oral and written communication, critical, analytical and summarising faculties, abilities in research, the learning and transmission of knowledge, independence and the ability to make judgements in the field of specialisation and overlapping areas. 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 those mentioned in the «Career prospects» section.

SYLLABUS

Common module
- Common courses off campus
- Environmental seminar
- Communication courses
- Joint environmental project
- Etc.

20 ECTS credits

Specialisation module
One free-choice area of specialisation
60 ECTS credits

1. Physical and Chemical Processes of the Environment
- Stable Isotopes as Environmental Markers
- Minerals-Water-Microbes Interface
- Air, Soil and Water Pollution
- Etc.

2. Risk Analysis, Monitoring and Representation
- Quantitative Advanced Risks and Vulnerability
- Practical Introduction to 3D Methods
- Analysis of Environmental Data
- Etc.

3. Environmental Social Issues
- Representation and Social Construction of Risks
- Analysis of Environmental Controversies
- Ethics of the Environment and Sustainable Development
- Territorial Risk and Policy
- Integrated Territorial Policies
- Etc.

Within each specialisation there are optional blocks which allow the completion of compulsory courses:
- Analytical Methods
- Risk and Simulation
- Subsurface Environment
- Industrial Ecology

Dissertation
40 ECTS credits

PRACTICAL INFORMATION

Admission requirements
Candidates must be holders of a Bachelor of Science in Geosciences and Environment degree awarded by the University of Lausanne, or of a Bachelor's degree in Geography, Environmental Studies or Earth Sciences 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.

Regulations and additional information concerning the course
Web site of the Faculty of Geosciences and Environment:
www.unil.ch/masterenvi

Final enrolment date
30 April
Candidates needing a visa to study in Switzerland: 28 February.

Start of courses
mid-September

Part-time Master's degree
See Directive 3.12:
www.unil.ch/interne/page44629.html#3

Academic calendar
www.unil.ch/central/page4804.html

General information on studies, career prospects and guidance
Guidance and advisory service:
www.unil.ch/soc

Accomodation and financial assistance
Office for socio-cultural affairs:
www.unil.ch/sasc

International students
www.unil.ch/international

Study abroad possibilities
www.unil.ch/echanges

UNIL | Université de Lausanne
Faculté des géosciences et de l'environnement