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Is nature
still hiding
some of its
secrets?

Master of science (MSc) in earth sciences

GENERAL OUTLINE

Objectives

The Master of Science in Earth Sciences allows you to benefit from advanced teaching in different specialist fields of geology according to the chosen orientation, namely:

- Sedimentary Geology, Environmental Geology, Geology of Reservoirs
- Geochemistry, Alpine Tectonics, Ore Deposits
- Geological Risks

Regardless of which orientation is followed, you receive in-depth training in field work and numerous analytical techniques, as well as in the processing of quantitative data and modelling.

Career prospects

The Master of Science in Earth Sciences develops a large number of skills such as: oral and written communication, discernment, analytical and summarising skills, research experience, and so on.

This range of skills, combined with specialist knowledge acquired during studies, prepares students for a very varied range of professions and careers, including:

- Consultants in Applied Geology
- Environmental Consultants
- Oil Industry Research
- Mining Industry
- Engineering Industry
- Cantonal/Federal Administration
- Academic Careers

Alumni move into a wide variety of roles, for example as a geologist, group leader for polluted sites and soil, laboratory manager or petrophysicist.

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

GENERAL INFORMATION

Organisers

Lake Geneva School of Earth Sciences:
www.geoleman.ch
(UNIGE-UNIL)

Degree awarded

Master of Science (MSc) in Earth Sciences

ECTS credits

120

Duration

4 semesters

Teaching language

French/English. Recommended level: C1.
The degree course may be followed entirely in English.

Contact

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Additional information

www.geoleman.ch



EDUCATIONAL CONTENT

Description

The orientation **Sedimentary Geology, Environmental Geology and Geology of Reservoirs** focuses on the analysis of sedimentary basins through different disciplines (stratigraphy, micropaleontology, seismology, modelling, geochemistry). It introduces you to the science of petrology and the management of natural resources viewed from an environmental perspective.

The orientation **Geochemistry, Alpine Tectonics, Ore Deposits** focuses on the study of mountain areas in all their complexity. This includes an in-depth understanding of the processes of petrology, geochemistry and tectonics; the ability to integrate diverse scientific information in the resolution of concrete problems; practical expertise in field work in orogenic areas, and in structural analysis, calculation and modelling methods. The orientation offers a scientific basis for finding and evaluating natural resources (mineral, fluid) while at the same time assessing and attenuating the environmental impact of their exploitation.

The orientation **Geological Risks** offers the chance to specialise in numerous aspects of environmental geology and geological risks, particularly risk management, flood risks, seismic risks, risk of landslides and volcanic eruptions, risk modelling. The orientation provides a scientific grounding in physicochemical processes while at the same time providing the tools needed to assess and attenuate their impact on the environment.

SYLLABUS

Teaching for this programme is delivered at both UNIGE and UNIL. Train fares for travel between the two universities are reimbursed.

1st–2nd semesters

Compulsory courses
24 ECTS credits

Optional courses
36 ECTS credits

Master's Project
10 ECTS credits

3rd–4th semesters

Master's dissertation : research project (field work, laboratory analysis, etc, and drafting of the manuscript)
50 ECTS credits

PRACTICAL INFORMATION

Admission requirements

Candidates must be holders of a Bachelor of Science in Geosciences and Environment, subject area Geology, awarded by the University of Lausanne, or of a Bachelor of Science in Earth Sciences awarded by the University of Geneva. 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/tempspartiel.

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



Unil

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Faculté des géosciences
et de l'environnement