

Is our organism
ours to control?

Master of science in Medical biology

GENERAL OUTLINE

Objectives

The Master of Science in Medical Biology degree is intended for students who are interested in biological research in the medical field.

Teaching focuses on the acquisition of key areas of expertise necessary for the development of new pre-clinical and clinical medical applications. This training gives students an in-depth knowledge of basic cellular functions, systems that transmit signals inside and among cells, human biology, and the normal and pathological functioning of the most important systems of the human organism. Considerable attention is also paid to learning and applying techniques used in medical biology, as well as to personal research work.

Skills development and career prospects

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 judgments 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 and economic sectors. The following career prospects may be cited as an example:

- Academic research
- Pharmaceutical industry
- Biomedical industry
- Biotechnology firms
- Medical laboratories
- Hospital environment
- Toxicological analysis laboratories

GENERAL INFORMATION

Organiser

School of Biology,
Faculty of Biology and Medicine:
www.unil.ch/ecoledebiologie

Degree awarded

Master of Science (MSc) in Medical
Biology

ECTS credits

90

Duration

3 semesters

Teaching language

English

Enrolment

Applications must be submitted on time to the Admissions Department:
www.unil.ch/immat

Contact

Ms Almudena Vazquez
Secrétariat des étudiants de l'Ecole de
biologie
Quartier UNIL-Sorge
Biophore
CH - 1015 Lausanne
Tel. +41 (0)21 692 40 10
Fax +41 (0)21 692 40 05
biologie-etudiants@unil.ch



EDUCATIONAL CONTENT

Description

The first semester provides an introduction to human biology in the broad sense. Teaching covers the basic cellular functions and the transmission systems of signals inside and among cells, as well as the normal and pathological functioning of the most important systems of the human organism. Students may obtain animal experimentation certification or follow a clinical research module.

The second semester is dedicated to specialisation and students choose a study path from among the four options available: Immunology and Cancer, Metabolism, Neurosciences, and Pharmacological Sciences. They begin their personal research work in the chosen study path.

The third semester is dedicated to the completion of personal research work.

Examinations

Examinations are held once every semester. For subjects included in the common study programme of the first semester and courses of the second semester there are both written and oral examinations.

Examination questions are often comprehensive and refer to the subject matter of several courses. The successful completion of personal work carried out for the Master's degree is worth 45 credits (of the 90 necessary to obtain the Master's degree).

Mobility

Students registered for a Master's degree cycle may complete part of their studies in a partner institution recognised by UNIL.

If the mobility study programme is accepted by the School of Biology and confirmed by examination passes, the credits earned will be recognised and validated in the student's degree course.

SYLLABUS

1st semester

Common study programme

Courses, seminars and practical work in:

- Cellular Biology
- Signalling
- Microbiology
- Cardiovascular Diseases
- Neurological Diseases
- Metabolic Diseases
- Immunological Diseases
- Impact of a Patent on your Research

Optional Modules:

- Animal Experimentation Certificate or
- Clinical Research Module

Personal Research Work (Introduction)

30 ECTS credits

2nd semester

Choice of study path

Courses and practical work in:

- Immunology and Cancer
- Metabolism
- Neurosciences
- Pharmacological Sciences

In each study path, start of Personal Research Work

30 ECTS credits

3rd semester

Personal Research Work

- Continuation and Conclusion of Research Work

30 ECTS credits

PRACTICAL INFORMATION

Admission requirements

Candidates must be holders of a Bachelor of Science in Biology or in a field considered to be equivalent 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

Internet site of the School of Biology: www.unil.ch/ecoledébiologie/page80026.html

Administrative information

Ms Almudena Vazquez
biologie-etudiants@unil.ch

Head of studies

Prof. Olivier Staub
Olivier.Staub@unil.ch

Final enrolment date

30 April

Candidates needing a study visa must apply two months prior to this deadline.

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

Office for educational counselling and careers guidance:
www.unil.ch/soc

Accommodation 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

