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Is our organism ours to control?

Master of science (MSc) 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.

Career prospects

University studies develop a great many transverse skills: oral and written communication, critical, analytical and summarising faculties, abilities in research, management of bibliographical resources and familiarisation with scientific literature relating to the field, etc.

This panoply of skills, combined with specialist knowledge acquired in the course of studies, is excellent preparation for a wide range of economic sectors:

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

Alumni have different positions, such as entrepreneur biologist.

Example of opportunities and alumni's profiles:

www.unil.ch/perspectives/biologie

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. Recommended level: C1.

Contact

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

Additional information

www.unil.ch/eb-mb

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. You may obtain animal experimentation certification or follow a clinical research module.

The second semester is dedicated to specialisation and you choose a study path from among the four options available: Immunology and Cancer, Metabolism and Human Health, Neurosciences, and Pharmacology and Toxicology. You begin your personal research work in the chosen study path.

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

Mobility

The personal research project can be conducted in a partner institution recognised by UNIL.

SYLLABUS

1st semester - 30 ECTS credits

Common study programme

Courses, seminars and practical work in:

- Cell Biology
- Intracellular Signalling
- Microbiology
- Cardiovascular Diseases
- Neurological Diseases
- Metabolic Diseases
- Immunology and Cancer
- Impact of a Patent on your Research
- Scientific Writing

Optional Modules

- Animal Experimentation Certificate or
- Introduction to Clinical Research

Personal Research Work

Introduction

2nd semester - 30 ECTS credits

Choice of study path

Courses and practical work in clinical medicine and biostatistics

Options:

- Immunology and Cancer
- Metabolism and Human Health
- Neurosciences
- Pharmacology and Toxicology

Start of Personal Research Project

3rd semester - 30 ECTS credits

Personal Research Work

- Continuation and Conclusion of Research Work

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.

Administrative information

Ms Almudena Vazquez
biologie-etudiants@unil.ch

Head of studies

D^{re} Marie-Christine Broillet
Marie-Christine.Broillet@unil.ch

Enrolment and final dates

Applications must be submitted to the Admissions Service before 30th April:
www.unil.ch/immat

Candidates requiring a visa to study in Switzerland: 28th February.

Start of courses

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

Part-time Master's degree

Subject to certain conditions, Master's studies can be followed part-time. In this case they correspond to semi-continuous studies (50%) for the entire duration of the course: All theoretical teaching in the first and second semester and then all practical work (introduction to research and Master's dissertation).

For more details concerning the requisite conditions:
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



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Faculté de biologie
et de médecine