

MOLECULAR BIOLOGY

Master's degree program

Master of Science: M Sc in Molecular Biology

This Master's degree program is offered by the Biozentrum of the University of Basel. It provides direct access to modern molecular biology research. The Biozentrum Basel conducts research and teaching at the international top level in a working atmosphere which equally promotes professional and personal development. The core activity of the Master's degree is a supervised practical research project of at least 12 months length. In parallel, the students attend lectures to strengthen their knowledge in their area of specialization. The possible areas of specialization are Biochemistry, Biophysics, Cell Biology, Computational Biology, Developmental Biology, Genetics, Immunology, Infection Biology, Microbiology, Neurobiology, Pharmacology and Structural Biology. The students reach their Master's degree by demonstrating their capacity to conduct a scientific research project and by presenting the results of their work in both written and oral form.

Focal area of teaching and research

Research at the Biozentrum Basel embraces a wide range of topics and techniques, following the overarching intent to understand the molecular organization of living organisms. The research is concerned with structure and function of macromolecules, the wiring of regulatory circuits, as well as identifying general principles underlying complex biological systems and their dynamic interactions. Research at the Biozentrum comprises the areas Growth & Development, Infection Biology, Neurobiology, Structural Biology, Biophysics, Computational & Systems Biology. These research areas share concepts and technologies and act in a synergic and collaborative manner. New relevant questions often arise at the interface between research areas, while innovative solutions can be provided by the individual techniques. The Master's degree program has been designed to meet all requirements of modern biological research.

Course structure Master studies

The program is a postgraduate "mono-course" consisting of one core subject. It awards a total of 90 ECTS credits. Entrance to the program requires a successfully completed Bachelor's degree.

Curriculum Master's Degree in Molecular Biology	KP
Master's thesis	50
Master's examination	10
In-depth professional studies	30
Total	90

One ECTS credit point roughly equals 30 hours of study.

Course language

The language of instruction is English. The Master's thesis is generally to be written in English.

Exams

Student performance is assessed through course accompanying certificates, proof of course participation according to study contracts, a Master's thesis and through a Master's examination.

Language stays / Internships

No language stays or internships are required.

Combination of subjects

The degree programs at the Faculty of Science are generally mono-courses with the possible addition of an in-depth subject and an elective subject.

Start of program

The program can be started in fall or spring semester.

Duration of study

The Master's program lasts three to four semesters. There are no restrictions on the duration of study.

Further degrees

Teaching diploma for secondary schools: The teaching diploma enables teaching within the general school system at the Secondary Level II and is based on the academic degree at Master's level of a university in one or two subjects. In addition, two semesters of vocational training at the school for teacher education at FHNW have to be completed. The diploma does not require a Master's degree in a second subject; however, it is advisable due to better career options later after graduation. Details can be found in UNI INFO «Lehrdiplom für Maturitätsschulen».

Also see: www.fhnw.ch/ > Studium > Pädagogik > Diplom Sekundarstufe II

Doctorate: A Master of Science in Biology qualifies for a doctorate in biochemistry, biophysics, botany, computational biology, genetics, microbiology, molecular biology, neurobiology, structural biology, cell biology or zoology. Trans-faculty doctorates are possible in the fields of epidemiology, history of the sciences, medical-biological research and pharmacology. The doctoral studies last typically 3–4 years. The acceptance of the dissertation is followed by an oral examination in the doctoral subject.

Career opportunities

Molecular biology is often considered as this century's key science. After successfully completing their Master's degree the graduates are optimally qualified for a doctorate or to follow a profession in the life sciences. The subject Molecular biology is of interdisciplinary nature and the career opportunities include activities in the fields of medicine, biotechnology and pharmaceutical industries. Practical applications of the subject are found in basic research and increasingly also in business, society and politics. Numerous jobs are open within the university, in private industry, government service, schools and organizations, be it as researchers, communicators, teachers or advisors.

Admission

The following degree allows for direct admission to the Master's degree program Molecular Biology: Bachelor of Science (B Sc) in Biology, Major in Molecular Biology from the University of Basel. Other Swiss or foreign degrees from an education institution recognized by the University of Basel require approval by the examination commission of the Faculty of Science.

Binding information under: www.unibas.ch/admission

Application

Application under www.unibas.ch/application; the application fee amounts to CHF 100.-. Application deadline for the fall semester is April 30, for the spring semester 30 November.

Enrollment

The letter of admission also informs students on the procedure of enrollment. In general, students with a Swiss educational background do not have to be present in person for enrollment.

Tuition fees and scholarships

Tuition fees per semester (also for examination semesters): CHF 850.-
Individual costs of living etc. are not included.

Scholarships and student loans: Applications should be sent to the responsible office of the canton in which the parents are eligible to pay their taxes.

Mobility

Semesters abroad are possible and supported by scholarship programs. The mobility programs facilitate the stay at other Swiss universities or foreign universities. Further Information: Student Exchange, Petersplatz 1, 4001 Basel, T +41 61 207 30 28, mobility@unibas.ch

Further information

Guidelines and regulations of the Master's Degree in Molecular Biology see www.bio.unibas.ch/de/reglemente

Information about the University of Basel

- The course directory can be found under: www.unibas.ch/vv
- Basler Studienführer: www.studienberatung.unibas.ch
- Website: www.unibas.ch

Student advice

Questions regarding the study of Molecular Biology can be discussed with the Study Counselor for the Master Program Molecular Biology.

Contacts

Study Counselor for the Master Program Molecular Biology

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