

Study program for the Master degree program Physics of Life

Admission

1. The admission to the MSc Physics of Life requires a Bachelor of Science (BSc) with at least 180 credit points (CP) that was obtained at a Swiss university or Swiss federal institute of technology, with the following accomplishments:
 - a. Either the BSc comprises at least 150 CP in one of the following “fields of study”: Physics, mathematics, computer science, computational science and engineering, chemistry, biochemistry, life sciences and technologies, mechanical engineering, civil engineering, electrical engineering, micro engineering, material science, chemical engineering.
 - b. Or the BSc comprises at least 150 CP from more than one of the following “fields of study”: Physics, mathematics, computer science, chemistry, biochemistry, and biology, but at least 60 CP of these 150 CP must be from the “fields of study” physics, mathematics, computer science, and chemistry.
2. For BSc degrees from a recognized university that do not fall under point 1 above, the teaching committee will evaluate the equivalence with the degrees listed in point 1, using the corresponding Bachelor degree programs of the University of Basel as a reference. If the University of Basel does not offer this degree program, a degree program of another Swiss university will be used as a reference. In the case of engineering degrees, a degree program from the Swiss federal institute of technology will be used as a reference.
3. Admission obligations and conditions may not exceed 30 CP. If they would exceed 30 CP, admission is not possible.

Note added during translation regarding the term “fields of study” in the Admission section: The list of all “fields of study” at universities in Switzerland is published by [swissuniversities.ch](https://www.swissuniversities.ch/fileadmin/swissuniversities/Dokumente/Lehre/Liste_der_Studienrichtungen_25.10.2019.pdf) here: https://www.swissuniversities.ch/fileadmin/swissuniversities/Dokumente/Lehre/Liste_der_Studienrichtungen_25.10.2019.pdf

For university degree programs in Switzerland, the “field of study” that is formally associated with a degree program is listed on the entry of this degree at [studyprogrammes.ch](https://www.studyprogrammes.ch).

Teaching language

The teaching language is English.

Structure of the degree program

Passing the Master degree program, CP	Modules
18 CP	Foundations in Physics of Life
20 CP from two projects	Research projects
30 CP	Master thesis
10 CP	Master exam
12 CP within the Master degree programs of the Faculty of Science, with - at least 6 CP within the Master degree program in Molecular Biology	Elective area
90 CP	Master degree program

Calculation of the final grade

The grade of the module “Foundations in Physics of Life” is calculated from the credit-point-weighted average of the grades for the individual courses in this module.

The Master grade is calculated from the weighted mean of the grade of the Master exam (weight 1/4), the grade of the Master thesis (weight 2/4), and the grade of the module “Foundations in Physics of Life” (weight 1/4).

Research projects

Each of the two research projects lasts three months. The topic of the research projects must be within the scope of the “Physics of Life”. The research projects are conducted under the supervision of a lecturer of the Faculty of Science, or a lecturer of the Department Biomedicine, the Department Biomedical Engineering, the Friedrich Miescher Institute for Biomedical Research, or the Swiss Topical and Public Health institute. The research projects are graded with pass/fail.

Master thesis

The Master thesis generally lasts six months. The topic of the research projects must be within the scope of the “Physics of Life” and the suggestion of the topic for the Master thesis must be approved by the teaching committee before the Master thesis is started.

The Master thesis is conducted under the supervision of one or more lecturers of the Faculty of Science, the Department Biomedicine, the Department Biomedical Engineering, the Friedrich Miescher Institute for Biomedical Research, or the Swiss Topical and Public Health institute.

In case more than one person supervises the Master thesis, they perform the evaluation and grading of the Master thesis together. If the Master thesis is conducted under the supervision of only one person, an additional expert must participate in the evaluation and grading of the Master thesis. At least of the persons that evaluate and grade the Master thesis must be a member of the Faculty of Science.

Master exam

After completing the Master thesis, the Master exam will take place. The duration of the Master exam is 60 minutes. The scope of the Master exam comprises the topic of the Master thesis, the scientific literature related to the Master thesis, and the scientific field of the Master thesis. The examiners are the

lecturers who supervised and graded the Master thesis. The grade of the Master exam will be determined by these persons together.

Responsible teaching committee

Physics of Life

The teaching committee consists of at least three members of the Department Biozentrum. It comprises representatives of the Group I and optionally Group V and the Study Coordinator. The members of the teaching commission are elected by the Department Assembly. The teaching committee can delegate the daily operation to the head of the teaching committee.

Final comment

This study program comes into action on 1st of August 2024. It applies to all students that start their studies for the MSc Physics of Life on 1st of August 2024 or later.