



Regulations for the Doctoral Program Systems Biology

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I. General Information

1. General Principles

The goal of the interdisciplinary doctoral program in Systems Biology is to recruit exceptional young scientists from various disciplines such as computer Sciences, (Bio)informatics, Biological Sciences, Physics and Engineering and to educate them in the field of Systems Biology over the course of their doctorate.

The doctoral program Systems Biology imparts foundational knowledge for working in this emerging field and educates students in the project-specific (biological and/or mathematical) aspects of their doctorate.

2. Program Overview

In the doctoral program in Systems Biology, students progress from a master's degree to a Dr. sc. nat. UZH or a Dr. eth. in 3-4 years. PhD students can choose their research topic from a wide variety of topics in Systems Biology. An admissions committee determines whether candidates are admitted to the program.

To successfully complete the program, PhD students must fulfill the following requirements:

- The programs Systems Biology and Molecular and Translational Biomedicine annually jointly offer a three-day introductory course (1 ECTS Credit) and a two-week block course (3 ECTS Credits) in a) Biology and b) Computational Biology. Students must participate in the two-week block course "Technology and Systems Approaches in Biology" as well as at least one of the program's other block courses. They must earn a total of at least 6 Credit points in block courses offered by the program.
- Earn at least 12 Credit points in total.
- Submission of a research proposal.
- Regular meetings with the doctoral committee.
- Submission and defense of a dissertation documenting the student's own original scientific research.
- Fulfillment of any other requirements set by UZH or ETHZ.

Depending on where PhD students are matriculated, they will receive their degree either from the University of Zurich or ETH Zurich.

The doctoral program belongs to the Life Science Zurich Graduate School (LSZGS).

II. Admission

1. Applicants must have earned a master's or an equivalent degree when they begin their dissertation. However, they need not have finished their master's at the time of their application and admissions interview.

2. Track I: Online Application on the LSZGS Website

Application deadlines are July 1 and December 1. The admissions interviews and lab tours take place over the course of three days in February (week 6) and September (week

36). The program coordinator will inform students whether they have been accepted within the four weeks following the application deadline.

Admission interviews take place on the first day, and lab tours over the course of all three days.

During these three days, applicants have the opportunity to meet with research group leaders who have open PhD positions. By the Tuesday following the interviews, the applicants and the research group leaders should submit their list of preferences to the program coordinator.

According to the rules of the Life Science Zurich Graduate School, the matching of candidates to research group leaders will be conducted simultaneously for all PhD programs.

3. Track II: Direct Application to a Research Group Leader

Applicants also have the option to apply directly to a research group leader who may accept them as a doctoral student. For admission to the PhD Program in Systems Biology, PhD students must apply to the program within six months of beginning their dissertation.

The same rules apply for interviews and admission to the program as apply to candidates in track I. Application deadlines are January 15 and August 15, the admissions interviews take place in week 6 and 36.

4. The program’s official language is English. The admissions interview will serve to ascertain whether a candidate’s English skills are sufficient for communication in science.

III. Structure of the Doctoral Program

1. Curricular Portion

Module/Course	ECTS Credits
Compulsory modules Block course “Technology and Systems Approaches”	3
Core elective modules Participation in at least one of the following courses: Introduction to Biology (1 ECTS Credit) Introduction to Computational Biology (1 ECTS Credit) Block course Computational Biology (3 ECTS Credits)	min. 3
Elective modules Institute and group seminars, Participation in a convention with a personal contribution, summer schools, etc.	max. 2
Transferrable skills	min. 4
Total	min. 12

2. Teaching Assistance

Obtaining a doctoral degree requires students at MNF (UZH) to participate in 100-420 hours of teaching. In addition to teaching at the institutes (teaching bachelor and master’s students, monitoring and grading exams, supervising master’s students, etc.), students can also complete their teaching requirement at the Science Education Center (in the area of Life Sciences, Mathematics, Physics, Chemistry and Geography).

Implementation of the teaching requirement should be conducted in consultation with the Studies Coordination in Biology according to the rules specified in the document "Teaching requirement for PhD students" (see

www.biologie.uzh/studium/Doktorat.html).

3. Doctoral Committee and Doctoral Committee Meetings

The doctoral committee consists of at least three members:

- The direct advisor (member of the Systems Biology program).
- At least one other member of the Systems Biology program, preferably working within a different discipline as the advisor.
- At least one external member (not a member of the Systems Biology program).

The PhD students select the members of the committee with the consent of their advisor.

The PhD students are responsible for organizing meetings. At least three members (including the PhD advisor) must attend.

The first meeting must take place within the first 6 months (as an exception and in consultation with the program coordinator, the meeting can be postponed to maximally 12 months after the beginning of the dissertation). A follow-up meeting should be scheduled every 12 months. The PhD defense may not take place more than 18 months after the doctoral committee's last meeting.

Students should prepare a research proposal for the first meeting, describing their project, its scientific background, preliminary results and future goals and experiments. PhD students should send their research proposal to the committee and the program coordinator at least one week ahead of meetings. The program coordinator should give the PhD students guidelines for how to write their research proposal.

PhD students should present and defend their research proposal during the first doctoral committee meeting.

In the case of an unsatisfactory performance, doctoral students can repeat the doctoral committee meeting and defense of their research proposal after three months. If they fail a second time, they will be expelled from the program.

The head of the doctoral committee should send a brief report to the coordinator after every meeting. The report should record the date, the members present, the committee's decision (requirements fulfilled/not fulfilled) and any specific recommendations. The program coordinator provides students with a form for this report. The report must be signed by the members of the doctoral committee as well as the PhD student and will be considered the doctoral agreement.

PhD students should send the members of the doctoral committee and the program coordinator a progress report one week ahead of the subsequent meetings.

If a PhD student repeatedly fails to fulfill these requirements, the program director can expel him or her from the Systems Biology program.

IV. Doctoral Degree

Confidentiality

An important aspect of the doctoral program is the exchange of scientific data and results between the various institutes at both universities. Such results should be treated as strictly confidential by all those involved and may not be passed along to individuals outside of the program if they have not yet been published by the author or their initial discoverer. No member of the doctoral program may use scientific results to the disadvantage of the university. In particular, no member may infringe upon the University's right for the protection of its intellectual property by publishing data prematurely.