MISSION STATEMENT

The aim of this highly interdisciplinary Ph.D. program “Systems Biology” of systems biological researcher of the University of Zürich and ETH in Zürich and Basel is to train students from various disciplines and departments including Computer Science and (Bio)Informatics, Biological Sciences, and Engineering to become future leaders in Systems Biology. Systems Biology aims at the quantitative analysis and predictive mathematical modeling at all levels of biological organization. The Ph.D. program “Systems Biology” provides students with the generic skills for working in this new scientific field as well as training in project-specific (biological and / or computational) aspects of their Ph.D. work.

PROGRAM OVERVIEW

The Ph.D. Program “Systems Biology” is a 3-4 year Ph.D. program. It is part of the Life Science Zurich Graduate School and collaborates with the program “Systems Biology of Metabolic Diseases” (SPMD) in the teaching of graduate courses. Participating students can choose from a broad selection of research topics and participate in cutting edge research. Enrollment into the program is decided by an admission committee. To graduate, students need to fulfill the following requirements:

- All requirements imposed by their host institution (University of Zurich or ETH Zurich) and home departments.
- Completion of at least two of the program’s block courses with a minimum of 6 credit points. Courses are organized into ‘introductory’ and ‘advanced’ levels, and at least one course of each level or two advanced courses have to be completed.
- Deposition and defense of a Ph.D. thesis describing the student’s original research work.

The final degree is conferred by either the University of Zurich or the ETH Zurich, depending on the academic affiliation of the host laboratory. In order to finish their Ph.D., students must acquire 12 credit points. This requirement complies with ETHZ and University of Zurich regulations. Specific regulations are detailed below.
REGULATIONS FOR THE Ph.D. PROGRAM

1. Thesis committee

It is highly desired for each student to assemble a thesis committee consisting of at least three persons:

- The thesis supervisor
- At least one member of the Ph.D. program, preferably from a discipline that is different from the thesis supervisor’s background.
- At least one person from outside the Ph.D. program (preferably an international expert)

The thesis supervisor and the student will choose the thesis committee.

One of the members – but not the student’s supervisor - will chair the thesis committee.

With regard to the thesis committee, the Systems Biology PhD program complies with the ETH Zurich and University of Zurich regulations.

2. Project Proposal

After one year, at the latest, the student has to write a project proposal (approximately 2000 words, excluding references) describing his/her proposed Ph.D. work. The program administrator will hand out guidelines for the students. (Students of the ETH may send in the proposal as it is required for the ETH admission). The proposal has to be submitted to the program administrator.

3. Thesis committee meetings

The students are responsible for organizing the meetings. At least three members (including the thesis supervisor) have to be present. International committee members may participate via video conferencing.

Committee meetings will be held after 9-12 months, after 2 years and if necessary after 3 years, depending on how advanced the student is with his/her work.

For the first meeting, students have to send a progress report (up to 3000 words) to all members of the thesis committee and to the program administrator not later than two weeks before the meeting. This report consists of the project proposal supplemented by first results.

During the first meeting the student has to present and defend the progress report, giving a short presentation followed by a discussion with the committee members.
In case of unsatisfactory performance, the students can repeat the defense after three months. Students that fail a second time will have to leave the program.

For the second and third meeting, students will send new progress reports to all members of the thesis committee and to the program administrator not later than two weeks before the meeting. This report includes the results of the project and an outlook over the remaining period of the Ph.D. project.

After every meeting a short account should be submitted to the program administrator by the chair of the committee including the date of the meeting, names and affiliations of attendees, significant comments or recommendations of the committee.

4. Course work during Ph.D. program

- **Thematic block course**
The PhD Program “Systems Biology” will offer two advanced block courses of app. 2 weeks with thematic focus on a) Advanced Course on Systems Biology (jointly with the PhD Program “Systems Biology of Metabolic Diseases”) and b) Computational Biology.

Two more basic introductory courses of app. 1 week each will be offered on “Introduction to Biology” and “Introduction to Computational Biology”.

The course “Systems Biology” is compulsory. Additionally one of the other three block courses or the advanced course “Medical Science” (offered by the PhD Program “Systems Biology of Metabolic Diseases”) has to be taken.

- **Courses of the Life Science Zurich Graduate School**
It is highly desirable for the students to attend courses organized by the Life Science Zurich Graduate School on:

  - **Scientific exposition**
The course contains issues such as how to write an abstract, a paper, a grant application.

  - **Ethics in Science**
This course will give an introduction in methods and tools to identify, understand and address ethically significant problems that arise during scientific work.

  - **Legal and social aspects of knowledge and technology transfer**
An important task of science is the transfer of knowledge and technology to society and industry. This course gives an overview about the legal and social aspects that have to be considered to improve this transfer.

  - **Other “soft skill” courses**
The Life Science Zurich Graduate School will offer additional courses e.g. on project management, team working, time management, entrepreneurship, which students can attend voluntarily.

Equivalent courses can be accepted by the program committee on a case-by-case basis (e.g. when taken elsewhere).

- **Advanced training courses**
Advanced courses also outside Zurich and Basel are encouraged throughout the Ph.D. program and pertinent courses will also be posted at the programs website.
• **Courses of other Program in the Life Science Zurich Graduate School**
Students are free to take courses of other programs of the Life Science Zurich Graduate School (the number of participants might be limited).

5. **Thesis defense**

The thesis defense will follow the regulations established by the students host institute at ETH Zurich or University Zurich.

6. **Publications and Presentations**

Any publications with a Ph.D. Student as author or co-author should mention the Ph.D. program “Systems Biology” in the author’s affiliation.