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Subject Curriculum (Study Plan) for Third-cycle (PhD) Education

Molecular Life Sciences

Swedish title: Molekylär biovetenskap

TNNOBI00

Swedish curriculum adopted by the Board of the Faculty of Science and Technology (Third-cycle Educational Board) on 2019-08-21.
Translation approved on 2019-08-21.

The Study Plan for third-cycle studies consists of three parts: a general part, this subject specific study plan, and each doctoral student's individual study plan.

Objective

Building on the basic education in the subject area, studies at the doctoral level should provide competence that lies at the front lines of the research within the subject.

By participation actively in the courses and by conducting a degree project guided by a supervisor, the doctoral student should achieve significant theoretical knowledge in the subject and extensive practical skills in the methodology that is relevant to the topic.

Upon completion of the doctoral degree examination, the candidate will be able to plan and carry out research in the subject of Molecular Life Sciences. He/she should also be capable to work in research and development in other parts of society outside academia. Additionally, the candidate should be able to actively participate in the scientific discussion and present his/her goals and results orally and in writing to different audiences in English.

The holder of a licentiate degree must have experience of independent research and should acquire the subject-oriented and methodological competences required for active participation in the research project in the chosen specialization. Furthermore, he/she should be able to critically evaluate scientific developments in the subject.



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Subject Description

Postgraduate studies in Molecular Life Sciences will be carried out at the Department of Cell and Molecular Biology.

Molecular Life Sciences covers a broad subject-area in biology that involves studies from the molecular to the cellular level. The subject includes, for example, molecular biology, biochemistry, structural biology, biophysics, systems biology, bioinformatics, immunology, cell biology, microbiology and molecular evolutionary biology. More detailed information on the ongoing research within the subject can be obtained through discussion with the researchers at the Department of Cell and Molecular Biology and from the information available at the website <http://www.icm.uu.se>.

Eligibility

Basic Eligibility

The basic eligibility for third-cycle studies is described in the general part of the study plan.

Special Eligibility

For third-cycle studies in Molecular Biosciences it is required that the accepted candidate has passed courses in relevant topics of at least 60 credits at the advanced level. It is required that the student is well acquainted with the theories in the current research field through advanced level courses and have completed a master degree project in a relevant discipline.

Provided that the above course requirements are met, the special eligibility can be obtained through studies in the natural science programmes, biomedicine programmes or engineering programmes. Equivalent knowledge can also be acquired in other ways in Sweden or abroad. For specific projects, additional skills and training can be required.

Admission

Applicants for third-cycle studies in Molecular Life Sciences must submit an application to the Head of the Department of Cell and Molecular Biology. Doctoral students can be accepted continuously during the year.



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Upon admission to postgraduate education, the Swedish title of the degree is to be specified in the application. According to decision (TEKNAT 2012/215), postgraduate education in Molecular Life shall lead to a *filosofie doktorsexamen*. The English rendering will be a licentiate/doctorate degree of philosophy.

Program structure

At the time of admission, each doctoral student and her/his supervisor shall prepare an individual study plan after consultation with the professor responsible for third-cycle education. The plan is to be approved by the Head of the Department (by delegation of the Faculty Board) at the time of admission.

The individual study plan shall be annually reviewed by the doctoral student and her/his supervisor jointly, and supplemented with a summary of the achieved results and the plans for the coming year. Significant changes as well as any disagreement on the individual study plan shall be reported to the Head of the Department or, if deemed necessary, to the Third-cycle Educational Board.

Courses

The third-cycle studies should include courses that are intended to provide a wider insight into the subject complementary to the competence acquired during research.

The courses can consist for example of natural science courses, methodology courses, literature studies, seminars, educational courses and participation in international workshops and symposia. The combination of the courses can vary and the courses planned for each doctoral student should be clearly stated in the individual study plan.

In addition to courses at Uppsala University, the doctoral are encouraged to undertake courses at other universities within and outside the country.

A course in research ethics (of at least 2 higher education credits) and an introduction course to PhD studies (of at least 3 higher education credits) are mandatory for licentiate and doctoral degree. A course in university educational theory is also mandatory for doctoral students who teach at basic and advanced level. For the doctoral degree, there is a compulsory literature course within the specific subject for doctoral studies (of 10 higher education credits), which is examined at half-time.



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Requirements for doctoral degree

The requirements for the doctoral degree consist of passed examinations in the courses included in the approved individual study plan of each doctoral student, as well as a passed public defense of the degree project. The studies awarded a doctoral degree comprise 240 higher education credits (four years of full-time studies), of which the doctoral thesis comprises a minimum of 120 higher education credits and the course part a minimum of 40 higher education credits.

Requirements for licentiate degree

A doctoral student who has acquired at least 120 higher education credits (two years of full-time studies) is eligible for a licentiate degree. The requirements consist of passing the examinations included in the program stage and receiving a passing grade on an academic paper of at least 60 higher education credits. The part of the course amounts to a minimum of 20 higher education credits.