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

Computer Science

Swedish title: Datavetenskap

TNDAVE00

Swedish curriculum adopted by the Board of the Faculty of Science and Technology (Third-cycle Educational Board) on 2012-01-23, revision on 2017-08-30. Translations approved 2012-01-23 and 2017-08-30.

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
In relation to the first- and second-level education in the subject area, the graduate level education shall give additional insight into the central parts of Computer Science and deep knowledge in at least one subarea. This includes training in research methodology, along with good insight into the issues that exist in the research area and its applications. Through supervision and thesis writing, the doctoral student should become well prepared to critically and independently plan, execute, and present (orally as well as in writing) research and development projects of high international quality.

The doctoral student shall also be able to present her/his own goals and results (orally and in writing) for different target groups in English and, in the case of Swedish-speaking doctoral students, in Swedish.

Subject description
Computer Science encompasses theory and experimental methodology for construction and programming of computers. Central to the subject is to develop and analyze - from both theoretical and practical points of view - concepts, methods, languages, and programs that aim to make construction, programming, and utilization of computers easier, more reliable, and more efficient. The subject area also includes theory that is directly motivated by problems in computer science.
Eligibility

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

Special Eligibility
Special eligibility for third level education in Computer Science is granted to persons who have passed courses in Computer Science or in areas relevant to Computer Science, covering at least 60 higher education credits. Persons who have acquired corresponding knowledge outside Sweden are also eligible.

Admission
Applicants to third level education in Computer Science must submit an application to the head of the Department of Information Technology. Positions within the third level education are normally appointed several times per year.

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 Computer Science shall lead to a filosofie doktorsexamen or teknologie doktorsexamen. The English rendering will in either case be a licentiate/doctorate degree of philosophy.

In connection with the admission, a plan for the financing of both the personal subsistence of the doctoral student, and her/his research, shall be supplied.

Program structure
In connection with the admission, each doctoral student and her/his supervisors shall prepare an individual study plan after consultation with the professor responsible for the third level program. The plan is to be approved by the head of the department (by delegation of the Faculty Board), in connection with the admission.

The individual study plan shall be reviewed annually, jointly by the doctoral student and her/his supervisors, and be provided with a summary of achieved results and plans for the coming year. Significant changes and possible disagreement concerning the
individual study plan shall be reported to the head of the department or, if deemed necessary, to the Board for Third-level Education.

Courses

Courses in third level education may be of different kinds, such as lectures, literature studies, practical exercises, field studies, etc. The courses and literature studies are intended to provide wider insights into the subject as a complement to the specialist competence acquired through the research work.

A course in research ethics of at least 2 higher education credits is 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.

A doctoral degree should include courses corresponding to normally 60-90 higher education credits. The exact number of credits is specified in the individual study plan. A Licentiate degree should include courses corresponding to 30 higher education credits. For a doctoral degree at least 15 higher education credits should be for graduate level courses outside the area of Computer Science or outside the department. In addition, at least 15 higher education credits should be for courses in the area of Computer Science, but outside the area of the dissertation work. In addition, at least 15 higher education credits should be individual specialization courses where the student independently studies material connected to his/her own dissertation work.

At most 15 higher education credits from courses on undergraduate level education can be included.

Requirements for doctoral degree

The requirements for doctoral degree include passed examinations in the courses included in the approved individual study plan of the doctoral student, and a passed public defense of the doctoral thesis. The program leading to the doctoral degree amounts to 240 higher education credits (four years of full-time studies), of which the thesis part amounts to a minimum of 120 higher education credits and the course part to a minimum of 60-90 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 30 higher education credits.

Other
Research in Computer Science is conducted in a wide international cooperation and requires a substantial international flow of information. It is necessary that the graduate student can understand and write texts in English.

If the doctoral student does not complete a licentiate degree, he/she shall instead give a seminar, which presents achieved research results and planned research in a way that is accessible to an audience with a background in computer science. The seminar should be announced publicly at the department.