



UPPSALA
UNIVERSITET

Translation of Curriculum Statement for Graduate Level (Third-level) Education

Computer Science with specialization in Computer Communication

Swedish title: Datavetenskap med inriktning mot datorkommunikation

TNDAVE01

Swedish Curriculum and English translation adopted by the Board of the Faculty of Science and Technology (Board for Third-level Education) on 2012-01-23.

Translation approved 2012-01-23.

The Curriculum Statement for Third-level Education consists of three parts: a general part, this subject specialized curriculum statement, 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 Computer Communication. 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 and 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 to different target groups in English and, in the case of Swedish-speaking doctoral students, in Swedish.

Subject description

Computer Science with specialization in Computer Communication encompasses theory and experimental methodology for the construction and programming of computer and communication units. The area is a specialization of Computer Science. Central to the subject is to develop and analyze – from both theoretical and practical



UPPSALA
UNIVERSITET

points of view – concepts, methods for performance prediction, transmission technologies, communication protocols, that aim to make construction, programming, and utilization of computer communication easier, more reliable, and more efficient.

The area is strongly coupled to Swedish Telecom- and Internet industries.

Eligibility

Basic eligibility

The basic eligibility for third level education is described in the general part of the curriculum statement.

Special eligibility

Special qualification to education at research level in Computer Science with specialization in Computer Communication is granted to persons who have passed examination in Computer Science courses or courses relevant for Computer Communication, covering at least 90 higher education credits and 15 credits in Computer Communication. Persons who have acquired corresponding knowledge outside Sweden are also qualified.

Admission

Applicants for third level program in Computer Science with specialization in Computer Communication must submit an application to the head of the Department of Information Technology. Admissions to places in third level programs take place normally several times per year.

In connection with the admission it must be stated how it is planned to finance both the personal financial maintenance of the doctoral student, and her/his research.

Program structure

In connection with the admission, each doctoral student and her/his supervisor shall draw up an individual study plan after consultation with the professor in charge of the third level program. The plan must 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 jointly by the doctoral student and her/his supervisors, annually, and be provided with a



UPPSALA
UNIVERSITET

summary of the achieved results and the plans for the coming year. Significant changes and any disagreement on 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 insight into the subject as a complement to the specialist competence acquired in the research work.

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 graduate level courses within Computer Science but not considered to be within the dissertation topic. Furthermore, at least 15 higher education credits should be individual specialization courses within Computer Communication connected to the doctoral students' 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 a doctoral degree consist of on one hand passed examinations in the courses included in the approved individual study plan of each doctoral student, and on the other hand a passed public defense of the doctoral thesis. The program leading to the doctoral degree amounts to 240 higher education credits (four years of fulltime studies), of which the thesis part amounts to a minimum of 120 higher education credits and the course part to a minimum of 60 higher education credits.

Requirements for licentiate degree

A stage of at least 120 higher education credits (two years of full-time studies) in the third level program may be completed with a licentiate degree. The requirements for this are that the doctoral student both has



UPPSALA
UNIVERSITET

passed the examinations included in the program stage and has got an academic paper amounting to a minimum of 60 higher education credits passed. The course part 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.

After each period corresponding to one year of full-time studies, the doctoral student shall give a public seminar presentation of the accumulated research results and plans for continued research. (The licentiate seminar and thesis defense procedure may be counted in this context; since the third level education amounts to four years of fulltime studies, this means that at least two additional seminar presentations should be given.)

For the seminars besides the licentiate seminar and thesis defense, the doctoral student should present written material, for example in the form of a proposal for licentiate or doctoral project, containing a summary of results and a plan for continued work. An external examiner shall review the written material and the seminar presentation. This examiner should normally be a senior researcher from another research program. The external examiner and the supervisor will make a joint decision about whether to recommend the doctoral student to continue according to the plan.