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This is a translation of the approved general syllabus that is written in Swedish

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General syllabus for doctoral studies in Informatics

Field and subject

Field of information technology

The field of information technology is defined as technology and methods for collecting, representing, processing, analyzing, communicating, using and storing information in artificial and natural systems and how information intense systems are developed in the purpose to achieve usable system solutions for individuals, organizations or society.

Subject description

Informatics is a subject within the field of information technology which combines technology, design and service perspectives on information technology, and aims to develop theories and concepts to analyze, describe, understand and design new IT use. Informatics focuses on different aspects of the design, organization and use of IT at individual, organizational and societal level. In terms of method it covers user studies, empirical case studies, experimental investigations and design studies.

Eligibility

Basic eligibility

Basic eligibility to doctoral education is given in the higher education ordinance chapter 7, paragraph 39:
Basic eligibility to education on doctoral level if one has
1. Graduated with a degree on advanced level,
2. Completed course requirements of at least 240 credits, where at least 60 credits are on advanced level, or
3. In some other way within or outside the country gained corresponding knowledge.
The university can for an individual applicant give an exception from the requirement of basic eligibility, if there are special reasons (2010:1064)

Special eligibility

For eligibility to be admitted as student to doctoral education in informatics it is required that the student has a degree on advanced level (or has satisfied the requirements for courses comprising at least 240 credits of which at least 60 credits were awarded in the second-cycle) within informatics, information systems, interaction design, computer science, educational sciences or another area that is relevant for the research subject.

Selection

A selection is made among the applicants who fulfill the eligibility requirements. Judgment of the ability to complete the education is primarily done based on study results from basic and advanced level but also from other relevant criteria. For example, the following are especially considered:

- Knowledge and abilities relevant for the thesis work and the subject computer science and engineering. These can be shown through appended documents and an interview,

- Ability to do independent work, and to formulate and approach scientific problems, e.g. through a discussion of their previous thesis work,

- Ability to do written and oral communication.

Goals

Licentiate degree

Knowledge and understanding

For licentiate degree the doctoral student shall
- show knowledge and understanding within the research area, including current specialist knowledge within a limited part of this and deepened knowledge in scientific methodology in general and the specific methods of the research area in particular.

Skills and abilities

For licentiate degree the doctoral student shall
- show ability to critically, independently and creatively and with scientific accuracy identify and formulate questions, to plan and with adequate methods conduct a limited research work and other qualified tasks within given timeframes and thereby contribute to the development of knowledge and to evaluate this work,
- show ability to, in both national and international contexts, clear written and oral presentation and to discuss research and the results in dialogue with the scientific community and society in general, and
- show such skill that is necessary to independently participate in research and development work and to independently work in other qualified activities.

Judgment and approach

For licentiate degree the doctoral student shall

- show ability to do research ethical judgments in their own research,
- show insight about the opportunities and limitations of science, its role in society and humans responsibility to how it is used, and
- show ability to identify need of additional knowledge and to take responsibility for knowledge development.

Doctoral degree

Knowledge and understanding

For doctoral degree the doctoral student shall
– show wide knowledge within and a systematic understanding of the research area as well as deep and current specialist knowledge within a limited part of the research area, and
– show familiarity with scientific methodology in general and with the specific research areas methods in particular.

Skills and abilities

For doctoral degree the doctoral student shall
– show ability to do scientific analysis and synthesis as well as independent critical review and judgment of new and complex phenomena, questions and situations,
– show ability to critically, independently, creatively and with scientific accuracy identify and formulate questions as well as plan and with adequate methods conduct research and other qualified tasks within given timeframes and to review and value such work,
– with a thesis show the ability to through own research significantly contribute to the development of knowledge,
– show ability to, in both national and international contexts, do oral and written presentations that with authority present and discuss research and research results in dialogue with the scientific community and society in general,
– show ability to identify need of additional knowledge, and
– show conditions for both research and education as well as in other qualified professional contexts how to contribute to the development of society and support the learning of others.

Judgment and approach

For doctoral degree the doctoral student shall

– show intellectual independence and scientific probity as well as the ability to do research ethical judgments, and
– show deepened insight about the possibilities of science and its limitations, its role in society and humans responsibility to how it is used.

Overview of the disposition and requirements of the education

The offered education consists of many components such as courses, seminars, projects and individual studies, whom all contribute to building the students' competence and to reach the goals according to the higher education ordinance. The student is offered the possibility and is encouraged to under supervision participate in research directly from the start of the education. Within the doctoral education, perspectives concerning internationalization, sustainable development, and equality are also treated.

Education on doctoral level is either 120 credits and lead to licentiate degree or 240 credits and lead to doctoral degree. The division into course credits and research work credits is shown in Table 1 below.

Overview of the educations disposition and requirements	Obligatory courses (credits)	Optional courses (credits)	Thesis (credits)	Sum (credits)
Doctoral degree	30	30	180	240
Licentiate degree	30	15	75	120

Table 1. Overview of credits for doctoral degree and licentiate degree.

Degree requirements

Education on doctoral level is ended with licentiate degree or doctoral degree. The doctoral student also has the possibility to get a licentiate degree as a partial stage in the education.

Licentiate degree

For licentiate degree the following is required:
- approved courses of at least 45 credits and
- approved scientific thesis of at least 75 credits

Thesis and courses shall together be at least 120 credits.

Courses

Courses for doctoral education are obligatory or electable. The obligatory courses (30 credits) shall include research methods and theory of science. Electable course (15 credits for licentiate degree) can include both general courses and individual courses.

General courses include both general research methods and theories within the field, and courses in adjacent research areas, or subject specific within the topic for the thesis. Individual courses can be literature courses where the literature/seminars are chosen by the doctoral student together with the supervisors and graded orally or written. The electable courses shall, along other aims, be selected to ensure enough subject knowledge in terms of both breadth and depth.

Decision on credit transfer of courses from another education is made by Student Affairs after statement from the main supervisor.

Obligatory courses:
Introduction for doctoral students (7,5 credits)
Qualitative methods (7,5 credits)
Informatics scientific foundation (7,5 credits)
Digital service innovation (7,5 credits) or Digital learning (7,5 credits) is chosen depending on focus of the thesis work.

Scientific thesis
The scientific thesis shall comprise 75 credits.

Doctoral degree
For doctoral degree the following is required:
- approved courses of at least 60 credits and
- approved scientific thesis of at least corresponding to at least 180 credits
Thesis and courses shall together be at least 240 credits.

Courses
Courses for doctoral education are obligatory or electable. The obligatory courses (30 credits) shall include research methods and theory of science. Electable courses (30 credits for doctoral degree) can include both general courses and individual courses.

General courses include both general research methods and theories within the field, and courses in adjacent research areas, or subject specific within the topic for the thesis. Individual courses can be literature courses where the literature/seminars are chosen by the doctoral student together with the supervisors and graded orally or written. The electable courses shall, along other aims, be selected to ensure enough subject knowledge in terms of both breadth and depth.

Decision on credit transfer of courses from another education is made by Student Affairs after statement from the main supervisor.

Obligatory courses:
Introduction for doctoral students (7,5 credits)
Qualitative methods (7,5 credits)
Informatics scientific foundation (7,5 credits)
Digital service innovation (7,5 credits) or Digital learning (7,5 credits) is chosen depending on focus of the thesis work.

Scientific thesis
The scientific thesis shall comprise 180 credits.

Degree title

After completed education a degree certificate is awarded (after application) with the following degree title:

For licentiate degree

Degree of Licentiate of Philosophy in the subject Informatics (Filosofie licentiatexamen inom ämnet informatik)

For doctoral degree

Degree of Doctor of Philosophy in the subject Informatics (Filosofie doktorsexamen inom ämnet informatik)

Transition

Doctoral students that have been admitted before the general syllabus is valid, can after consultation with the main supervisor and director of study, request to transition to this syllabus. The individual study plan shall then be updated.