# General Study Plan for Doctoral Programme in Information Society

## Department of Computer and Systems Sciences, Stockholm University

Established by the Faculty Board, 26 November 2013[1]

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Third-cycle

# 1 Subject description

*Information Society* comprises theory building in computer and systems sciences, as well as practical and theoretical domain applications which are dependent on modern information and communication technology (ICT). *Information Society* as a scientific field focuses on creation, distribution, usage, integration and manipulation of information, as well as production of knowledge and cultural artefacts. The subject area develops various fields such as democracy, didactics and pedagogy, health care, psychology and game development, thereby spanning over a large area where the unifying factor is a strong dependence on ICT-based solutions. At the Department, the subject is represented primarily by research in models for e-democracy, medical records systems, ICT pedagogical systems and online treatment for stress. These kinds of areas of application require research into how the design of, and functions in, ICT solutions can be developed within their respective fields.

# 2 The goals of the programme

For a doctorate, the doctoral student must show

*Knowledge and understanding*
- demonstrate broad knowledge within Information Society and a systematic understanding of the research area, as well as in-depth and up-to-date specialist knowledge within a defined section of the research area; and

- demonstrate adequate familiarity with the scientific methods in general and with the specific methods of the research area in particular.

*Proficiency and ability*
- demonstrate ability for scientific analysis and synthesis, as well as for independent critical review and assessment of new and complex phenomena, issues and situations,

- demonstrate ability to critically, independently, creatively and with scientific accuracy identify and formulate research questions; to plan and, with suitable methods, conduct research and other advanced tasks within given time frames, and to review and evaluate such work;

- demonstrate, with a thesis, ability to contribute significantly through own research to the development of knowledge;

- demonstrate ability, in both national and international contexts, to authoritatively present and discuss, orally and in writing, research and research results in dialogue with the scientific community and society in general;

- demonstrate ability to identify needs for further knowledge; and

- demonstrate qualifications to contribute to the development of the society and to support the learning of others, both within research and education as well as in other advanced professional contexts.

*Evaluation ability and approaches*
- demonstrate intellectual independence and scientific probity, as well as ability to make research ethical assessments; and

- demonstrate in-depth insight of the possibilities and limitations of science, its role in the society, and of the responsibility of people for how it is used.

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For a licentiate, the doctoral student must show

*Knowledge and understanding*
- demonstrate knowledge and understanding within the field of research, comprised of current specialist knowledge within a limited part of this, and in-depth knowledge of scientific method.

*Proficiency and ability*
- demonstrate an ability to critically, independently, creatively, and with scientific accuracy identify and formulate questions, to plan and using adequate methods conduct limited research work and other qualified tasks within given time-frames, thereby contributing to the development of knowledge, and to evaluate this work;

- demonstrate an ability in both national and international contexts to present and discuss, orally and in writing, research and research results in dialogue with the scientific community and society in general; and

- demonstrate the skills required to independently participate in research and development work and to work independently in other qualified activities.

*Evaluation ability and approaches*
- demonstrate an ability to make research ethics assessments in own research;

- demonstrate insight into the possibilities and limitations of the science, its role in society, and the responsibility of people for how it is used; and

- demonstrate an ability to identify needs for further knowledge and to take responsibility for own knowledge development.

# 3  Entry requirements

## 3.1  General entry requirements

A person who has fulfilled the general entry requirements for third-cycle courses and programmes is one who:

- has received an advanced degree;

- has completed course requirements of at least 240 credits, of which at least 60 credits at an advanced level;

or

- in some way, either within or outside the country, has acquired the equivalent knowledge on the whole.

The Department Board can, for individual applicants, permit exceptions from the general entry requirements if there are particular reasons in accordance with HEO 7:39.

*Transitional rules*
A person who, prior to July 1, 2007, has fulfilled the general entry requirements for admission to postgraduate education will thereafter be regarded as having qualified for admission to third-level courses and programmes, although only until the end of June 2015.

## 3.2  Specific entry requirements

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A person who has fulfilled the specific entry requirements to third-cycle courses and programmes is one who has at least 90 credits in computer and systems sciences, the humanities, behavioural sciences, pedagogy, health care, psychology, communications sciences, or other subject relevant to the programme, of which at least 15 credits must be independent work or the equivalent.

The programme is conducted primarily in English; doctoral students must master the language both orally and in writing to be able to profit from the programme and the course literature.

# 4   Admission

A special web based form is used for application for admission to doctoral studies. The director of graduate studies is in charge of the admission process. The decision on admission is made by the Department Head in cases where the funding for the doctoral studies is through a doctoral position or student grant; decisions in all other admission cases are made by the Faculty of Social Sciences. Notifications usually take place twice a year, with application deadlines of April 30 and October 15, in accordance with the decision of the Department Board.

Current positions for doctoral programmes and courses are announced in connection with the notification on the department's website, and in the media, which are determined in a particular order.

Applications must contain documents that confirm the applicant's qualifications. The admissions procedures are described in more detail in connection with the notification.

Prior to the decision on admission, the department must see to it that a plan for funding is established. The funding plan should also be indicated in, or attached to, the individual study plan.

# 5   Selection

The selection criteria in assessing the applicants are:

- independence in analysis and arrangement in prior work;

- problem formulation and stringency in prior work and research plans;

- previously demonstrated ability to keep to given time frames;

- methodological and scientific maturity;

- the ability to communicate and to collaborate; and

- subject-specific knowledge relevant to the programme.

# 6   The content and structure of the programme

## 6.1   The structure of the programme

At the beginning of every academic year, the department puts out a summary of the planned programme. The programme is given in the form of lectures, exercises, seminars and tutorials, balanced in a reasonable manner with regards to available resources, the number of doctoral students, the character of the courses, the wishes of the supervisors, and so on. The programmes intend to promote the opportunities for the doctoral students to independently assimilate the literature. As a link in the programme, the

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doctoral students must regularly participate in seminars throughout the entire duration of their studies. For a more detailed description of the course component of the programme, see Section 7.

## 6.2 Supervision, and study and career orientation

Doctoral students have the right to supervision during the time that can be considered necessary for the prescribed programme of 120 and 240 credits, respectively.

Two supervisors are appointed for every doctoral student accepted, one of which will be appointed principal supervisor. Supervisors may be changed upon written request of the supervisor or the doctoral student. One of the supervisors must be employed where the doctoral student has been enrolled. If the principal supervisor is not employed in the department, one of the other supervisors must be it. All supervisors must possess a doctorate, and the principal supervisor must posses the qualifications for a docent and have undergone training in supervising doctoral students. The supervisors must provide the doctoral students with advice and directions on how courses should be chosen and on how their thesis work should be directed, planned, and carried out. The doctoral students must keep their supervisors informed of the progress of their work through regular contact, and consult with them about the further structure.

The department must see to it that the doctoral students have been given study and career guidance during their time as doctoral students. The principal supervisor, and when necessary the unit representative (for doctoral students employed at the department), are responsible for orienting the doctoral students about job opportunities after their degree.

## 6.3 Individual study plan

In connection to admission, though at the latest three months after this, the doctoral students must draw up an individual study plan of the courses and elements that will be included in the programme, together with their supervisors on an established form. The funding plan established must be indicated in the individual study plan or attached to it. The individual study plans must be followed up and revised by the supervisors at least once per year. The principal supervisor is responsible for the individual study plans having an appropriate structure and being followed up properly. The individual study plan must be signed by the doctoral student, the supervisors, and the Department representative.

# 7 Courses and credit transfer

The programme contains a course component of 90 credits for a doctorate and 60 credits for a licentiate. In the course component, 60 advanced-level credits may be transferred, provided that the courses do not constitute qualifying courses.

The thesis component of the doctorate contains 150 credits, and 60 credits for the licentiate. The independent advanced-level work(s) can be integrated into the thesis work, with the supervisor's permission. Similarly, the licentiate thesis can be included, wholly or in part, as a part of the thesis for the doctorate, with the supervisor's permission.

The course component for the doctorate includes these mandatory courses:

- scientific theory, 7.5 credits

- quantitative and qualitative research methods, 7.5 credits

- scientific communications and research methodology, 7.5 credits

The course component for the licentiate must include two of these mandatory courses.

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The mandatory course component should be situated early on in the programme, but the supervisor evaluates when in the programme would be most suitable for the individual doctoral student. Potential entry requirements affect the order in which the courses can be taken.

45 credits for the doctorate, and 30 credits for the licentiate, should be comprised of courses that have obvious relevance for the field of information society.

Elective courses, and the total credits that can be transferred for this, is established by the principal supervisor after consultation with the other supervisor and the doctoral student. The elective course component should ensure the interdisciplinary competence of the doctoral student in the field. For doctoral students with backgrounds other than computer and systems science, a supplementary course is mandatory for both the doctorate and the licentiate:

- supplementary course in Computer and Systems Sciences, 15 credits

Supplementary qualifications during the programme may be of importance for doctoral students with a background in computer and systems sciences as well. The Director of graduate studies will assess this need in connection with admission, and notifies the principal supervisor and the doctoral student about supplementary qualifications of importance. The requirement for supplementary qualification can never exceed 15 credits.

The licentiate and the doctorate require that assigned supplementary qualifications be carried out completely and the credits transferred to the programme.

Supplementary courses are normally first-cycle.  Only half of the credit total for these courses can be transferred.

Cases where there is no English-language supplementary course and the doctoral student has not mastered Swedish will be handled by the Director of graduate studies in a particular order.

Individual tests are held in connection with each course. These can be both written and oral. The results are evaluated with the mark "pass" and "fail", respectively. The course component of the programme must be finished before the thesis can be defended. The equivalent also applies to the licentiate seminar.

# 8   Thesis and defence

## 8.1  Thesis

The doctoral thesis is based on independent research work, equivalent to 150 credits, and must document the doctoral student's ability to handle a scientific problem through developing or applying the relevant methodology.

The thesis work is the most important element in the programme, and is comprised of independent work within the field of Information Society; it connects to ongoing research activities at the Department. The subject of the thesis is established in consultation with the principal supervisor.

The quality of the thesis should be comparable to that of articles in good scientific periodicals. The thesis should be designed either as an amalgamation of scientific articles (compilation thesis) with an integrated summary of the included articles, or as a uniform, coherent work (monograph thesis). Even monograph theses should contain references to their authors' scientific articles. Works where the doctoral student is a co-author can also be included in the thesis. It should clearly be indicated which part of the work is the doctoral student's.

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Licentiate theses should demonstrate the doctoral student's ability to make use of scientific methodology and present problems and results in a precise and appropriate way. The licentiate thesis is equivalent to 60 credits.

## 8.2 Thesis defence

The doctoral thesis must be defended in a public defence, during term-time, and evaluated by a grading committee in accordance with HEO Chap. 6, and in the form of guidelines concerning thesis defences at the Faculty of Social Sciences; see www.samfak.su.se. The faculty examiner and grading committee are appointed by the Dean. One of the expressions "pass" or "fail" will be used as a grade.

## 8.3 Thesis defence

The licentiate thesis must be reviewed in a seminar that takes place during term-time by a faculty examiner with at least doctoral qualifications who has proper knowledge of the subjects and methods that are essential to the thesis. The principal supervisor is normally the chair of the seminar, but the Department Board may appoint another teacher as chair. If there are particular reasons, the Vice-Chancellor may permit the seminar to take place at a time other than term-time, and that the scientific thesis may be made available at a time other than term-time.

The thesis must have been made available at the Stockholm University Library and the Department at least two weeks before the seminar takes place. Announcements about theses must be sent to the other institutions in the same subject in the country's universities and colleges. The grade on the thesis will be determined by a professor, or potentially by a grading committee consisting of three teachers, of whom at least one is a professor. Other teachers must have at least doctoral qualifications. The faculty examiner or grading committee are appointed by the Faculty Board. The guidelines for licentiate seminars at the Faculty of Social Sciences can be found on the Faculty's website: www.samfak.su.se

One of the expressions "pass" or "fail" will be used as a grade.

# 9   The degree

A doctorate is equivalent to 240 credits. For a doctorate, an approved result of the defence carried out (defence of a doctoral thesis of 150 credits) and passing grades on all elements included therein according to the individual study plan are required. The thesis work must relate to all degree objectives for the doctorate in the subject of Information Society. The diploma is issued by the Vice-Chancellor after notification by the Department.

The licentiate is acquired after a doctoral student has completed a programme containing 120 third-cycle credits. For a licentiate, an approved result of the licentiate seminar carried out (defence of the scientific thesis of 60 credits) and passing grades on all elements according to the individual study plan included therein are required. The thesis work must relate to all degree objectives for the licentiate in the subject of Information Society. The diploma is issued by the Vice-Chancellor after notification by the Department.

# 10 Other instructions

For all other matters, refer to the current decision-making procedures and delegations of authority in the Faculty of Social Sciences regarding legislation at Stockholm University, as well as local provisions.

The applicable regulations on third-cycle courses and programmes are indicated in:

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- The Higher Education Ordinance (HEO): Chap. 5 (employment as a doctoral student), Chap. 6 (the programme) and Chap. 7 (admission to the programme), Appendix 2 (System of Qualification).
- Admission regulations for third-cycle courses and programmes at Stockholm University
- Guidelines concerning thesis defences at the Faculty of Social Sciences, SHV faculty board.
- Guidelines concerning third-cycle courses and programmes at the Faculty of Social Sciences, SHV faculty board.
- Admission regulations for third-cycle courses and programmes in Computer and Systems Sciences, Stockholm University