GENERAL SYLLABUS FOR THIRD-CYCLE PROGRAMMES IN THE SUBJECT AREA

INFORMATION TECHNOLOGY AND LEARNING, 120–240 CREDITS, AT THE UNIVERSITY OF GOTHENBURG

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GENERAL SYLLABUS FOR THIRD-CYCLE PROGRAMMES IN THE SUBJECT AREA INFORMATION TECHNOLOGY AND LEARNING, 120–240 CREDITS, AT THE UNIVERSITY OF GOTHENBURG

This programme syllabus was established by the IT Faculty Board at the University of Gothenburg on 08-12-2021 (reg. no. GU 2021/2695). It applies to doctoral students admitted to third-cycle programmes in the subject area Information Technology and Learning from 01-01-2022.

1. Title of qualification

The degrees referred to in this syllabus are the licentiate degree in Information Technology and Learning of 120 credits, as well as the doctoral degree in Information Technology and Learning of 240 credits.

For the licentiate degree the title of the qualification is Degree of Licentiate of Philosophy in Information Technology and Learning (Filosofie licentiatexamen i ämnet informationsteknologi och lärande).

For the doctoral degree the title of the qualification is Degree of Doctor of Philosophy in Information Technology and Learning (Filosofie doktorsexamen i ämnet informationsteknologi och lärande).

2. Subject area description

The use of information technology has far-reaching consequences for how learning is made possible, education is conducted, and how new knowledge is developed in society.

The subject Information Technology and Learning develops knowledge about how information technology changes the conditions for how people learn, conduct and participate in education, and develops new knowledge on individual, organizational and societal contexts. This includes interests in the design, use and conditions for IT-supported learning and knowing, along with critical perspectives.

3. Programme objectives

The aim of the education is to develop the qualified knowledge and skills that are required to be able to independently conduct research in the subject area of Information Technology and Learning and to contribute to the development of knowledge in the area.

3.1. Outcomes for a Degree of Licentiate

3.1.1. Knowledge and understanding

For a Degree of Licentiate, the third-cycle student shall:

- demonstrate knowledge and understanding in the field of research including current specialist knowledge in a limited area of this field as well as specialised knowledge of research methodology in general, and the methods of the specific field of research in particular.
**3.1.2. Competence and skills**

For a Degree of Licentiate, the third-cycle student shall:

- demonstrate the ability to identify and formulate issues with scholarly precision critically, autonomously, and creatively, and to plan and use appropriate methods to undertake a limited piece of research and other qualified tasks within predetermined time frames, in order to contribute to the formation of knowledge as well as to evaluate this work

- demonstrate the ability in both national and international contexts to present and discuss research and research findings in speech and writing and in dialogue with the academic community and society in general, and

- demonstrate the skills required to participate autonomously in research and development work and to work autonomously in some other qualified capacity.

**3.1.3. Judgement and approach**

For a Degree of Licentiate, the third-cycle student shall:

- demonstrate the ability to make assessments of ethical aspects of his or her own research

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

- demonstrate the ability to identify the personal need for further knowledge and take responsibility for his or her ongoing learning.

**3.2. Outcomes for a degree of Doctor**

**3.2.1. Knowledge and understanding**

For the Degree of Doctor, the third-cycle student shall:

- demonstrate broad knowledge and systematic understanding of the research field as well as advanced and up-to-date specialised knowledge in a limited area of this field, and

- demonstrate familiarity with research methodology in general and the methods of the specific field of research in particular.

**3.2.2. Competence and skills**

For the Degree of Doctor, the third-cycle student shall:

- demonstrate the capacity for scholarly analysis and synthesis as well as to review and assess new and complex phenomena, issues, and situations autonomously and critically

- demonstrate the ability to identify and formulate issues with scholarly precision critically, autonomously, and creatively, and to plan and use appropriate methods to undertake research and other qualified tasks within predetermined time frames and to review and evaluate such work.
• demonstrate through a dissertation the ability to make a significant contribution to the formation of knowledge through his or her own research

• demonstrate the ability in both national and international contexts to present and discuss research and research findings authoritatively in speech and writing and in dialogue with the academic community and society in general

• demonstrate the ability to identify the need for further knowledge and

• demonstrate the capacity to contribute to social development and support the learning of others both through research and education and in some other qualified professional capacity.

3.2.3. Judgement and approach

For the Degree of Doctor, the third-cycle student shall:

• demonstrate intellectual autonomy and disciplinary rectitude as well as the ability to make assessments of research ethics, and

• demonstrate specialised insight into the possibilities and limitations of research, its role in society and the responsibility of the individual for how it is used.

4. Content and structure

The programme for the doctoral degree comprises 240 credits (corresponding to 48 months of full-time studies) that must contain 90 credits of coursework and a dissertation of 150 credits. The programme for the licentiate degree comprises 120 credits (corresponding to 24 months of full-time studies) that must contain 45 credits of coursework and an independent project of 75 credits.

Coursework for the third-cycles programmes in Information Technology and Learning consists of:

• compulsory courses
• individual courses

Third-cycle students are trained early in active research work and scientific publication. They are encouraged to participate in various national or international conferences and research collaborations. Students are educated through participation in scientific discussions at seminars and in project work, developing the ability to acquire knowledge, develop ideas and defend them, as well as to write, critically review and publish scientific texts.

The dissertation work included in a doctoral degree must be presented at formal seminars on three occasions - planning seminar, middle seminar and final seminar. The dissertation included in a licentiate degree must be presented at a planning seminar. If a licentiate degree is awarded as a stage in a complete doctoral programme, no middle seminar is required.

As part of the programmes, the student is expected to participate in seminar activities within the framework of their education. They are also expected to contribute to joint activities at the Department of Applied Information Technology unless there are special reasons for not doing so.
4.1. Individual study plan
An individual study plan (ISP) shall be established for each third-cycle student via the University of Gothenburg’s online system for individual study plans (the ISP system). Regulations for the ISP are set out in the Rules and regulations for third-cycle studies at the University of Gothenburg – Doktorandreglerna.

The individual study plan shall contain planned, ongoing, and completed parts of the study programme and shall function as a guiding document for the entire study programme to ensure that the study programme is undertaken and monitored effectively. The individual study plan shall be revised at least yearly so that it is maintained as a relevant document throughout the duration of the studies.

4.2. Supervision
For each third-cycle student, at least two supervisors are to be appointed, one of whom shall be the principal supervisor and the other shall be the assistant supervisor. The principal supervisor shall normally have at least the qualifications required for appointment as a docent (Reader). At least one of the supervisors must be employed at the University of Gothenburg and the others must be linked to the university either through employment or via placement agreements. The regulations for supervision are described in the Rules and regulations for third-cycle studies at the University of Gothenburg – Doktorandreglerna.

Third-cycle students are entitled to supervision during the time that may be considered necessary for the prescribed education of 120/240 credits, two /four-years of full-time studies, and in accordance with what is stated in the IT Faculty's decision on the minimum scope of supervision at the third-cycle level. An examiner must also be appointed for each third-cycle student.

4.3. Course work
The education comprises 90 credits of coursework for a doctoral degree and 45 credits for a licentiate degree. The coursework contains a compulsory part and an individual part that is adapted to the student's research focus, interest and knowledge profile.

For doctoral students who also belong to an external graduate school, compulsory courses can be prescribed by this school which can be included within the individual coursework part (see 4.3.2 below).

For courses that are included in third-cycle education in Information Technology and Learning, there shall be a course examiner. See the Rules and regulations for third-cycle studies at the University of Gothenburg – Doktorandreglerna for further information.

4.3.1. Mandatory courses
For licentiate and doctoral degrees, 30 credits are required in scientific method and theory of relevance for the subject area Information Technology and Learning.

In addition to these 30 credits, the third-cycle student must:

- Take the doctoral course in ethics prescribed by the department
- Study higher education pedagogy corresponding to 5 credits
- Participate in research seminars, formal seminars, and present their research at national and international research meetings. For this they may receive credit according to the syllabus for a departmental joint seminar course for a maximum of 10 credits
4.3.2. Individual courses

The remaining courses are determined by the main supervisor in consultation with the student and examiner. Individual courses can include individual reading courses as well as relevant third-cycle courses at the University of Gothenburg and other higher education institutions. This individually designed course part is specific to each student and must be stated in the individual study plan.

4.4. The thesis and the defence

Central to the education is the writing of a scientific thesis (licentiate thesis) / dissertation (doctoral dissertation) where the student must advance knowledge within the research area. For the licentiate degree and doctoral degree, the student must carry out a research project and write an thesis / dissertation describing this work.

In the education leading up to the licentiate degree, the students’ own research work has a limited scope, but must nevertheless be given such a form that it leads to internationally publishable results. Both the licentiate thesis and the doctoral dissertation can take the form of a monograph or of a summary of papers with a number of scientifically reviewed texts, e.g. articles, book chapters and conference contributions that are tied together by a cover paper that connects the contributions, discusses and draws conclusions about the research as a whole. The individual texts may have been written together with the main supervisor, assistant supervisor or other persons. At least one of the texts must have the doctoral student as the main author. When co-authoring, the doctoral student's role in the work must be clearly stated.

The dissertation must be discussed at an open seminar on three occasions: a planning seminar, middle seminar and final seminar. External reviewers from relevant subject areas must be used at the middle and final seminars. These seminars are planned in accordance with the procedures decided by the Department of Applied Information Technology.

A doctoral dissertation as well as a licentiate thesis must be reviewed and defended at a public defence (viva) or licenciate seminar. When submitting a licentiate thesis, the head of department decides on the time for the seminar and the appointment of reviewers. When submitting a doctoral dissertation, the dean of the faculty decides the time of the defence and the appointment of reviewers.

The licentiate thesis/doctoral dissertation is graded as either failed or passed. Grades for licentiate theses are normally decided by the third-cycle studies examiner. If for some reason they cannot be the examiner, the dean can either appoint another examiner or a grading committee. Grades for doctoral dissertations are decided by a grading committee appointed by the dean.

5. Entry and admission requirements

To be admitted to third-cycle studies, the applicant must meet the criteria for general and specific entry requirements in accordance with what is stated in Chapter 7 of the Higher Education Ordinance.

5.1. General entry requirements

According to the Higher Education Ordinance Chapter 7 Section 39, a person meets the general entry requirements for third-cycle courses and study programmes if they:

1. Have been awarded a second-cycle qualification,
2. Have met the requirements for courses comprising at least 240 credits of which at least 60 credits were awarded at the second-cycle level, or
3. In some other way, in Sweden or abroad, have acquired substantially equivalent knowledge.

The Dean of the IT Faculty may grant individual applicants an exemption from the general entry requirements for third-cycle studies if there are special reasons for doing so.

5.2. Specific entry requirements

In addition to the general entry requirements for third-cycle studies, specific entry requirements may be applied. The meeting of specific entry requirements is essential for the doctoral student to be able to benefit from the third-cycle course or study programme (Higher Education Ordinance Chapter 7 Section 40). To be qualified for admission to a third-cycle programme in Information Technology and Learning the applicant is required to:

- have completed at least 60 credits in Information Technology and Learning, or other subjects of relevance such as Informatics, Applied Information Technology, Pedagogy, and Educational Science, of which at least 30 credits must be at the second-cycle level, or
- in any other way within or outside the country have acquired equivalent knowledge.

6. Admission and selection

Decisions on admission to third-cycle education are made by the head of department. For other regulations, see the Higher Education Ordinance, Admission Ordinance for third-cycle education at the University of Gothenburg, and the Rules and regulations for third-cycle studies at the University of Gothenburg – Doktorandreglerna.

In the event of more applicants than the number of places advertised, a selection will be made. According to Chapter 7, Section 41 of the Higher Education Ordinance, selection shall take place on the basis of an applicant's ability to successfully complete the education. Selection is based on the following assessment criteria:

- the applicant's documented subject knowledge relevant to the research area of Information Technology and Learning
- The applicant's documented knowledge of scientific theory and method, and
- the applicant's documented ability to conduct research work.

As part of the selection process, the Department of Applied Information Technology can arrange interviews with applicants.

7. Additional information

In other respects, reference is made to current legislation, guidelines at the University of Gothenburg and at the IT Faculty along with local regulations at the Department of Applied Information Technology. Information about the current regulatory framework is available at https://www.gu.se/it-fakulteten.

Evaluation

Follow-up and evaluation of third-cycle education at the Department of Applied information Technology is conducted in accordance with the Policy for Quality assurance and Continuous Quality improvement of
7.1. Transitional regulations

Doctoral students admitted to the subject Applied Information Technology with orientation towards education (Reg. No. U 2015/335) can be offered a transition to the subject Information Technology and Learning. Admission to Applied Information Technology with orientation towards education is to be regarded as fulfilling the entry requirements for Information Technology and Learning. Upon transition, the remaining study time will be the same as under the previous general study plan. The course requirements in the general study plan Information Technology and Learning, 120–240 credits, also apply to doctoral students who choose to transfer.