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SCHOOL OF ECONOMICS AND MANAGEMENT

Lund University

Department of Informatics

English translation of the Swedish original, which remains the only authentic original.

Syllabus for the Third Cycle Programme for the degree of Doctor in Informatics at Lund University

The syllabus for Informatics was adopted by the Board of the School of Economics and Management on 13 April 2007. See also Instructions for Third Cycle Studies at the School of Economics and Management, adopted on 13 April 2007, Reg No EHL 2007/66.

Third cycle studies in Informatics are offered to the extent that available resources allow.

1 Learning outcomes

For a degree of Doctor in Informatics students must have attained the following outcomes:

In terms of *knowledge and understanding* doctoral students must:

- demonstrate broad knowledge and systematic understanding of the research field of Informatics, as well as in-depth, up-to-date expert knowledge in a well-defined area of Informatics;
- demonstrate detailed knowledge of, and familiarity with, scientific methods in general and the application of these in Informatics in particular.

In terms of *skills and abilities* doctoral students must:

- demonstrate an aptitude for scientific analysis and synthesis, as well as for independent critical inquiry and the assessment of new and complex phenomena, issues and situations in Informatics;
- demonstrate the ability to critically, independently, creatively and with scientific rigour, identify and formulate research problems in Informatics, as well as planning and carrying out research and other advanced tasks within given time limits using appropriate methods, and finally be able to assess and evaluate such work;
- present a doctoral dissertation to demonstrate their ability to make a significant contribution to the field of Informatics through their own research;

- demonstrate the ability to present and discuss their own research and conclusions, both orally and in writing, in dialogue with the research community and the community in general, at both national and international levels;
- demonstrate the ability to identify the need for further knowledge in Informatics;
- demonstrate the ability to contribute to societal development and to support the learning of other individuals, within research and education, as well as at an advanced professional level.

In terms of *judgement and approach* doctoral students must:

- demonstrate intellectual independence and scientific integrity as well as the ability to make ethical evaluations about research,
- demonstrate in-depth understanding of the opportunities and limitations of science, its role in society and the need to take responsibility for its use

Students who complete the programme are qualified for the degree of Doctor.

2 Admission requirements

An applicant has basic eligibility for third cycle studies if he or she has been awarded a second cycle degree, has completed course requirements of at least 240 higher education credits, including at least 60 credits at second cycle level, or has acquired the equivalent knowledge in some other way, either in Sweden or abroad (HEO Chapter 7 section 39).

A person is eligible to be admitted to the third cycle degree programme in Informatics if he or she fulfils the basic eligibility requirements, and has documented qualifications worth at least 90 credits in Informatics, as well as having completed an independent project (degree project) worth at least 30 credits, of which 15 credits are in Informatics.

Students who are admitted according to the previous provisions have basic eligibility if they have graduated from a degree programme comprising at least 120 credits according to the old provision, or have the equivalent knowledge. An applicant is also eligible if he or she has acquired the equivalent knowledge in some other way, either in Sweden or abroad.

A person who is not admitted to the third cycle degree programme in Informatics may be given the right to attend courses.

3 Admission and selection

Admission to third cycle studies normally takes place twice a year. The department provides information about admission and application dates.

The announcement of vacancies on a programme shall be carried out in a manner that ensures the appropriate national and international coverage. The vacancy should also be announced on the notice board and website of the department. A postgraduate student who has been accepted for a Licentiate degree must submit a new application in order to start studying for a degree of Doctor.

Applications for the third cycle programme in Informatics must include the following items, which form the basis on which applicants are selected:

- CV with authenticated copies;
- Research plan, including the research question, purpose, theoretical framework, approach and relationship to previous research;
- Summary of the research plan (maximum 200 words);
- Preliminary time-plan for the research;
- Preliminary financing plan for research for the whole four-year period;
- Previously published articles, reports and essays, as well as a degree essay and master's thesis (an independently written report concluding the first and second cycles).

A financing plan must be settled at the time of admission. The financing plan should clarify the doctoral student's financing for the whole period of study. Admission means that the doctoral student is considered to have sufficient financing to successfully complete the doctoral programme within eight years. Admission without adequate financing is not allowed. The resources and expertise available in the department for supervisory purposes should also be considered.

The doctoral student shall register at the beginning of each term and must specify the scope of his/her studies during the coming term in consultation with his/her supervisor.

4 Programme information

The third cycle degree programme comprises courses and dissertation work. Instruction is given in the form of courses and supervision. A doctoral degree programme normally requires a four-year study period of full-time studies. To complete the programme in four years requires that the doctoral student shows dedication to his/her studies and makes optimum use of the instruction and supervision provided.

The degree programme comprises 240 higher education credits, divided into coursework of 90 credits and a doctoral dissertation of 150 credits.

4.1 Programme structure

A. The programme includes:

- compulsory courses in research methods and theory, comprising at least 22.5 higher education credits: courses in quantitative methods, qualitative methods and theory of science.
- courses offered by the department or in other subjects at Lund University or other universities, from which the remaining credits are gained. Internal and external courses are selected in consultation with supervisors.

Second cycle courses in Informatics (specifically the second year of a two-year master's programme) may be credited, as well as other literature-based courses.

Course examiners are appointed by the Head of Department. The examiner must be a professor or a teacher with qualifications equivalent to that of reader.

B. Research seminars:

As part of their studies and dissertation work, doctoral students must attend seminars about departmental research activities and seminars in which the ongoing work on dissertations of fellow doctoral students is presented. The doctoral students must have opportunities to present drafts about theoretical and/or methodological problems in their work, to submit plans, research papers and dissertation drafts, as well as review research papers and drafts by other doctoral students.

Doctoral students must present their dissertation work at a minimum of three seminars:

- A research proposal seminar during the introductory phase, at which a research proposal is presented, providing a more carefully prepared research plan with a research question, selected methods, preliminary theoretical framework and a plan for further work. There must be at least two reviewers, one of whom must have a degree of Doctor.
- A progress (intermediate) seminar, when work on the dissertation has progressed at least halfway. There must be a draft theoretical framework and the processing and analysis of empirical material must have started. There must be at least two reviewers, one of whom must have a degree of Doctor.
- A final seminar, at which a complete draft of the doctoral dissertation is discussed. There must be at least two reviewers with degrees of Doctor, one of whom must be a qualified reader.

The research proposal, the progress seminar report and the draft dissertation may be awarded the grades Pass or Fail.

4.2 Individual study plan

An individual study plan will be drawn up for each doctoral student, including the scope of the studies as well as their financing. The individual study plan is drawn up by the doctoral student and the supervisor, in consultation with the Head of Department. The plan should cover one year and is to be approved by the Head of Department. It is to be revised at least once a year.

4.3 Supervision

Each doctoral student is to have at least two supervisors, of which at least one must be qualified as a supervisor.

A doctoral student is entitled to supervision for the equivalent of four years of full-time studies or eight years from the date of admission. Supervision encompasses assistance in determining the focus of the course and dissertation, as well as assistance during the work.

Entitlement to supervision for more than four years (full-time studies) or eight years from the date of admission to the programme is on condition that the doctoral student studies actively and works in accordance with the individual study plan.

4.4 Doctoral dissertation

The doctoral dissertation is the most important component of the third cycle degree programme and should be based on independent scholarly work. The doctoral dissertation must demonstrate the doctoral student's skill in dealing with scientific problems in Informatics.

The doctoral dissertation must be defended orally at a public viva. The doctoral dissertation is awarded the grade *Pass* or *Fail*. The grade is based on the contents of the doctoral dissertation, as well as the public defence. The grade is set by a grading committee consisting of three or five members.

5 Teaching and examination

Teaching is provided in the form of lectures and seminars. At the end of each term information will be provided about the courses offered by the department during the next term. Additional information is provided about courses in other disciplines that may be included in the degree.

All doctoral students should have the opportunity to participate in the university's course for teaching and learning in higher education, and those involved in teaching shall participate in at least two weeks of the university's course for teaching and learning in higher education

Assessment is based on oral or written examinations, or through scientific papers and reports. Examinations are held during or in connection with the courses and the grades Pass or Fail are awarded.

In addition to courses, public seminars, research seminars and guest lectures will be held, in which the doctoral student is expected to actively participate.

For a degree of Doctor the doctoral student must have completed and passed the courses included in the degree programme, as well as receiving a Pass on their doctoral dissertation.

Further information regarding dissertations, public vivas and the grading committee is available in *Instructions for third cycle studies at the School of Economics and Management*, reg no EHL 2007/66.