



Master programme in Informatics

Masterutbildning i informatik

120 credits

Ladok Code: NIMAS

Version: 3.0

Level: Second cycle

Approved by: Education Committee 2015-03-04

Valid from: Autumn 2015

Valid for:

General Objectives

Second level education shall essentially build on the knowledge that students acquire in first level education or corresponding knowledge. Second level education shall involve a deepening of knowledge, skills and abilities relative to first level education and, in addition to what applies to first level education, shall

- further develop the students' ability to independently integrate and use knowledge,
- develop the students' ability to deal with complex phenomena, issues and situations, and
- develop the students' potential for professional activities that demand considerable independence or for research and development work.

(The Higher Education Act, Chapter 1, Section 9)

Objectives

The overall goal of the study programme is that students will gain the knowledge and skills necessary for highly specialized work or an academic career within IT. The programme provides in-depth knowledge in Informatics, with the possibility of an individually tailored specialization comparable to corresponding study programmes in Sweden and abroad.

The student will gain in-depth and specialized knowledge either in systems or program development, as well as complementary knowledge to encompass advanced concepts in development or use of IT.

The programme content is firmly grounded in research within Informatics and the education has a clear focus on preparing students for research, which is manifested both in the themes and issues discussed and the methods and techniques employed.

After completing the programme, the student will show the following:

Knowledge and understanding

- knowledge and understanding in the subject area of the programme, including a broad knowledge of the field, substantially more in-depth knowledge of a part of the field and insight into current research and development,
- in-depth knowledge of methods applicable in Informatics,

Skills and abilities

- ability to critically and systematically integrate knowledge and to analyse, assess and deal with complex phenomena, issues and situations, even with limited information,
- ability to critically, independently and creatively identify and formulate problems and to plan and use appropriate methods, carry out advanced tasks within specified time frames and thereby contribute to knowledge and to evaluate this work,
- ability in both national and international contexts, orally and in writing, to explain and discuss their conclusions and the knowledge and arguments behind them, in dialogue with different groups, and,

- the skills required to participate in research and development work or to work independently in other advanced contexts,

Judgement and approach

- ability in the main field of study to make judgments with regard to relevant scientific, social and ethical aspects, and demonstrate an awareness of ethical aspects of research and development,
- insight into the possibilities and limitations of science, its role in society and the responsibility for its use, and
- ability to identify the need for further knowledge and to take responsibility for their knowledge development.

Content

The programme contents builds on the department's undergraduate programme and enable further specialization for students holding bachelor degrees from different study programmes in Informatics or adjacent subjects. The programme contains two specializations: information systems and computer science. In addition to specialization courses, there are several compulsory advanced-level courses, one elective complementary course and individual thesis work. Students' prior knowledge determines which specialization they can take and is governed by course prerequisites for the specialized courses.

Common and compulsory courses, year 1

- Research Methods in Social Science (Advanced level, 7.5 credits)
- Trends in Informatics (Advanced level, 7.5 credits)
- Business Intelligence (Advanced level, 7.5 credits)
- Business Process Modelling (Advanced level, 7.5 credits)
- Data Mining (Advanced level, 7.5 credits)
- System Development Philosophies (Advanced level, 7.5 credits)

Specialization courses, Computer Science, year 1

- Advanced topics in algorithms (Advanced level, 7.5 credits)
- Elective complementary course (Basic level, 7.5 credits)

Specialization courses, Information Systems, year 1

- Elective course in information systems (Advanced level, 7.5 credits)
- Elective complementary course (Basic level, 7.5 credits)

Common and compulsory courses, year 2

- Research Topics in IT (Advanced level, 7.5 credits)
- Research Work in IT (Advanced level, 7.5 credits)
- Thesis for Master's Degree in Informatics (Advanced level, 30 credits)

Specialization courses, Computer Science, year 2

- Advanced parallel programming (Advanced level, 7.5 credits)
- Elective course in computer science (Advanced level, 7.5 credits)

Specialization course, Information Systems, year 2

- IT Project Management and IT Service Management (Advanced level, 15 credits)

The elective course in year one should offer a clear complement and broadening of the student's knowledge in IT.

Admission Requirements

- Bachelor's degree, 180 credits, in Informatics.
- Verified knowledge of English corresponding to the course English B/6 in the Swedish Upper Secondary School.

For further information about English language proficiency, please view:

<http://www.hb.se/en/International-student/Bachelor--Master-student/Application--Admission/Admission-process/English-language-proficiency/>

Degree

Completed program leads to a Degree of Master of Science (120 credits) with a major in Informatics.

The exam certificate will be issued at request on a special form. More information is available on the university website.

Degree certificates are issued upon application on a special form. More information is available at www.hb.se.

Student Influence and Evaluation

For quality assurance purposes, both each course and the programme as a whole are evaluated. Course evaluations are conducted in accordance with university policy and are compiled in course evaluation reports, which are communicated to students via the learning platform. Evaluation of the education programme takes place each academic year and is communicated via class meetings and the learning platform. The results of these evaluation is a valuable starting point for further course and programme development, and together with continuous improvement of evaluation processes, an important part of the quality assurance system.

Students have many opportunities to influence their education through, among other things, representatives on the departmental board and education committees. Student can also elect representative to the programme-specific education boards, consisting of representatives from faculty, students and relevant professional fields, where issues surrounding the education, its relevance to society, employment and professional fields are discussed.

Miscellaneous

Dnr. 160-15

The education is given on campus and in full-time. The education is in English.

Graduation from this program gives eligibility to studies at research level.

Courses from this program can be included in doctoral studies, after proper trial.

Later courses in the programme may have additional prerequisites, described in the course syllabus.

The language of instruction is English.