



## Programme syllabus

Organisational Committee

Faculty of Technology

Informationssystem, magisterprogram, 60 högskolepoäng  
Information Systems, Master Programme, 60 credits

### **Level**

Second Level

### **Date of Ratification**

Approved by Faculty of Technology 2009-09-15

Revised 2021-12-10

The programme syllabus is valid from autumn semester 2022

### **Prerequisites**

General entry requirements for second-cycle studies and specific entry requirements:

- English 6 or the equivalent.

## Description of Programme

The objective of this programme is to provide students with deeper knowledge of Information Systems Science. The programme also provides students with extended knowledge of design, implementation, integration and utilisation of information systems in all types of operations in the private and public section and organisations as well as preparing students for postgraduate studies in Informatics.

## Objectives

### *Knowledge and understanding*

For a Degree of Master (One Year) students must

- demonstrate knowledge and understanding in their main field of study, including both a broad command of the field and deeper knowledge of certain parts of the field, together with insight into current research and development work; and
- demonstrate deeper methodological knowledge in their main field of study.

### *Skills and abilities*

For a Degree of Master (One Year) students must

- demonstrate an ability to integrate knowledge and to analyse, assess and deal with complex phenomena, issues and situations, even when limited information is available;

- demonstrate an ability to independently identify and formulate issues and to plan and, using appropriate methods, carry out advanced tasks within specified time limits;
- demonstrate an ability to clearly present and discuss their conclusions and the knowledge and arguments behind them, in dialogue with different groups, orally and in writing; and
- demonstrate the skill required to participate in research and development work or to work in other advanced contexts.

#### *Judgement and approach*

For a Degree of Master (One Year) students must

- demonstrate an ability to make assessments in their main field of study, taking into account relevant scientific, social and ethical aspects, and demonstrate an awareness of ethical aspects of research and development work;
- demonstrate insight into the potential and limitations of science, its role in society and people's responsibility for how it is used; and
- demonstrate an ability to identify their need of further knowledge and to take responsibility for developing their knowledge.

#### **Programme specific objectives**

##### *Knowledge and understanding*

After completing the course, the student should be able to:

- demonstrate knowledge in describing and analyzing information and knowledge flows in the private and the public sector.
- demonstrate an understanding of the possibilities for information systems and information and communication technology (ICT) for innovative development of private and public companies.

##### *Skills and abilities*

After completing the course, the student should be able to:

- demonstrate skill and ability in describing and explaining the private and the public sector's information needs, designing and evaluating services and system solutions as well as to meet changes in work life.

##### *Judgement and approach*

After completing the course, the student should be able to

- demonstrate a comprehensive approach to the development and use of ICT in private and public companies,
- show insights about negative and positive impacts of ICT use in different contexts, from the individual, organizational and societal perspective and,
- ability to evaluate knowledge in informatics at the scientific level.

## **Content**

### *Programme Overview*

Major field of study is Informatics it is within the subject group Computer Science and Engineering, where Computer Science and Media Technology is included.

The program coordinator has the overall responsibility for the program. There is a program committee and their duties are to follow up the program course content and implementation.

The program consists of 60 credits in Informatics, corresponding to 1 year full time study. In semester 1 students are introduced to the main field with focus on organization, design and management, and the main methods, methodologies and theories. The program concludes with a degree project of 15 credits, which is placed part time during the last semester of studies.

The program is structured in a way that allows for joint classes during its duration with the two-year masters program in Information Systems.

### *Programme Courses*

The program is structured in courses of 7,5 or 15 credits.

Fundamentals of Information Systems, 15 credits, A1N\*

The course aims to provide the student with insight into the private and the public sector, in some cases, innovative development through ICT usage and preparing for a critical and constructive approach in the development and implementation of ICT.

Contemporary issues in IS research and development, 7.5 credits, A1N\*

The course focuses on current problem areas in Informatics and how different theories, approaches, methods and techniques can be used based on a scientific approach. It provides as well the student with knowledge and understanding of different trends in the developments of Informatics.

Information Systems Methodology. 7.5 credits, A1N\*

The course aims to provide students with basic knowledge of scientific paradigms, methodologies, and techniques in informatics / information systems. The introduction of these basic skills is also intended to give students an understanding of the relationship between research paradigm, problem area, research questions, theories and strategies for data collection and analysis.

Big Data in Organizations, Business, and Society, 15 credits, A1N\*

This course focuses on aspects related to the design, organization and coordination of data and information seen from a data analytic lifecycle perspective. The course includes methods, techniques and tools for analysis of big data, which is one of the current challenges in informatics. The course also addresses ethical issues involving insights about the impact on the public and private sectors in society.

Degree Project 15 credits, A1E\*

The students are writing their thesis in semester 2 parallel with another course. In this course, the student is given the opportunity to deepen their knowledge and skills in the subject area and its methodologies.

\* = Course in the main subject Informatics. The courses within the programme may change places.

### *Work Experience*

Contacts with the surrounding world and future labour market are introduced in several different ways. In some courses practical cases are included and associated with information systems in private and public companies or the alternative that students are given tasks that are appropriate to solve in collaboration with organizations. Contacts with the outside world are also established in the concluding degree project through

empirical studies.

#### *Studies abroad*

Studies abroad can be pursued on the initiative of the student. The studies are preferably made within the exchange programmes of the University. Confirmation that individual courses abroad can be included within the Master's Programme should be obtained in advance. Timing of studies abroad is made in consultation with programme coordinator.

#### *Scope of the programme*

Master's programme is an international programme with a large percentage of international students. Therefore, different perspectives are reflected through internationalization, sustainable development and these are natural diversity points for discussion in the course assignments. Courses that include methods and approaches are also conducted with critical reflections on how technology use can be studied and evaluated from the perspective of e.g. sustainable development, gender and diversity. Throughout the program's courses the impact of digital technology and its use in society are also discussed.

### Quality Development

The program is evaluated on a yearly basis through written and oral evaluations, conducted by teachers and students. Programs valuations are handled by the Faculty of Engineering and the Department of Informatics. Contacts with potential employers and alumni also provides information on the students' employability. For each course a course evaluation is conducted. The course evaluations, as well as program evaluations, managed by the Department of Informatics and the program committee in order to develop the quality of education. Compilations of course and program evaluations are available at the Department.

### Degree Certificate

After completing programme studies, corresponding to the requirements expressed in the Higher Education Ordinance degree order as well as Linnaeus University degree order, the student may apply for a degree. Those who have completed Master Programme in Information System, 60 credits, may obtain the following degree:

Filosofie Magisterexamen med inriktning informationssystem  
Huvudområde: Informatik

Master of Science (60 credits) with specialisation Information Systems  
Main field of study: Informatics

The degree certificate is bilingual (Swedish/English). This certificate is also complemented with a Diploma Supplement (in English).

### Other Information

To start the thesis the student must have following: General requirements for studies at advanced level and minimum 22,5 credits within the subject area Informatics at advanced level, or 15 credits informatics and 7,5 credits in another subject at advanced level. The course Information Systems Methodology, 7,5 credits has to be included in both options, or equivalent. This is regulated by the prerequisites of the syllabus for the thesis.