



Faculty of Arts and Social Sciences

Programme Syllabus

Reg.no. HS 2024/126

Master Programme in Information Systems

Programme Code:	SAINF
Programme Title:	Master Programme in Information Systems
Credits:	60/120
Programme Approval:	The programme syllabus was approved by the Faculty Board of Arts and Social Sciences on 8 February 2024 and is in effect as of the autumn semester of 2024
Language of Instruction:	English
Education Cycle:	Second (Master's)
Degree Type:	General
Entry requirements	A Degree of Bachelor of 180 credits, of which at least 90 credits are in Information Systems or Computer Science. English 6/B. Equivalency assessment can be performed.

Introduction

The Master Programme in Information Systems is a two-year master's programme with Information Systems as the main field of study. Students may also choose to graduate after one year, with a 60-credit Master's Degree.

The programme provides students with more advanced and specialised knowledge within the field of information systems, as well as the opportunity to develop the skills necessary to, with an inclusive approach, analyse and develop information system architectures that crosses both organisational and technical boundaries. Students approach digitalisation from these perspectives, and they develop their ability to apply their academic expertise in practice, as well as take responsibility for working towards sustainable development and gender equality.

The programme prepares the students for advanced work duties related to solving complex problems in the development of information systems for various organisations. The programme

also provides a solid foundation for students who seek to pursue PhD studies in the field of information systems.

We encourage international students to apply to the programme. All teaching, as well as all other communication within the programme, is conducted in English.

Programme outcomes

For programme completion, students must meet the national degree requirements.

National outcomes for a Degree of Master (60 credits)

Knowledge and understanding

For a Degree of Master (60 credits) the student shall

- demonstrate knowledge and understanding in the main field of study, including both an overview of the field and specialised knowledge in certain areas of the field as well as insight into current research and development work, and
- demonstrate specialised methodological knowledge in the main field of study.

Competence and skills

For a Degree of Master (60 credits) the student shall

- demonstrate the ability to integrate knowledge and analyse, assess and deal with complex phenomena, issues and situations even with limited information,
- demonstrate the ability to identify and formulate issues autonomously as well as to plan and, using appropriate methods, undertake advanced tasks within predetermined time frames,
- demonstrate the ability in speech and writing to report clearly and discuss his or her conclusions and the knowledge and arguments on which they are based in dialogue with different audiences, and
- demonstrate the skills required for participation in research and development work or employment in some other qualified capacity.

Judgement and approach

For a Degree of Master (60 credits) the student shall

- demonstrate the ability to make assessments in the main field of study informed by relevant disciplinary, social and ethical issues and also to demonstrate awareness of ethical aspects of research and development work,
- 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.

Independent project (degree project)

A requirement for the award of a Degree of Master (60 credits) is completion by the student of an independent project (degree project) for at least 15 credits in the main field of study.

National outcomes for a Degree of Master (120 credits)

Knowledge and understanding

For a Degree of Master (120 credits) the student shall

- demonstrate knowledge and understanding in the main field of study, including both broad knowledge of the field and a considerable degree of specialised knowledge in certain areas of the field as well as insight into current research and development work, and
- demonstrate specialised methodological knowledge in the main field of study.

Competence and skills

For a Degree of Master (120 credits) the student shall

- demonstrate the ability to critically and systematically integrate knowledge and analyse, assess and deal with complex phenomena, issues and situations even with limited information,

- demonstrate the ability to identify and formulate issues critically, autonomously and creatively as well as to plan and, using appropriate methods, undertake advanced tasks within predetermined time frames and so contribute to the formation of knowledge as well as the ability to evaluate this work,
- demonstrate the ability in speech and writing both nationally and internationally to clearly report and discuss his or her conclusions and the knowledge and arguments on which they are based in dialogue with different audiences, and
- demonstrate the skills required for participation in research and development work or autonomous employment in some other qualified capacity.

Judgement and approach

For a Degree of Master (120 credits) the student shall

- demonstrate the ability to make assessments in the main field of study informed by relevant disciplinary, social and ethical issues and also to demonstrate awareness of ethical aspects of research and development work,
- 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.

Independent project (degree project)

A requirement for the award of a Degree of Master (120 credits) is completion by the student of an independent project (degree project) for at least 30 credits in the main field of study. The degree project may comprise less than 30 credits, however no less than 15 credits, if the student has already completed an independent project in the second cycle for at least 15 credits in the main field of study or the equivalent from a programme of study outside Sweden.

Programme structure

The programme includes advanced information systems studies, with an emphasis on theoretical reflexivity, problem-solving and design work. Problem-solving exercises, including design activities, encourage students to actively participate in the learning process. Throughout the courses of the programme, instruction can take the form of lectures, exercises, case studies, seminars, projects, written assignments and oral presentations.

Degree of Master (60 credits)

The first semester comprises four mandatory courses for a total of 30 credits. These courses cover current topics such as Rules-as-Code and Virtual Reality, as well as the relationship between research questions, research approaches and research results. In the second semester, students write a 15-credit independent project. Beyond the independent project, students choose one of two elective 15-credit courses.

Degree of Master (120 credits)

The first semester comprises four mandatory courses for a total of 30 credits. These courses cover current topics such as Rules-as-Code and Virtual Reality, as well as the relationship between research questions, research approaches and research results. The second semester comprises elective courses (of at least 15 credits) on user-centred systems development or business systems in digital stores. The semester also includes optional information systems courses (up to 15 credits). The third semester consists 30 credits worth of optional courses in information systems. Students can, for example, complete a project (of either 15 or 30 credits) within an ongoing research project. Exchange studies or studies abroad can be undertaken in semesters 2 and 3. The choice of courses should be discussed with the programme director. The independent project for a Degree of Master (120 credits) comprises 30 credits.

More information about individual courses is available in the respective course syllabus.

Programme curriculum

The study route of the programme is described below. Note that titles and order of programme courses may be different compared to the list below.

Degree of Master (60 credits)

Semester 1

- English for IT professionals, 7.5 credits
- Rules-as-Code applications, 7.5 credits
- Research perspectives on AR and VR (augmented and virtual reality), 7.5 credits
- Planning and communicating an IS research project, 7.5 credits

Semester 2

Either

- Co-design and user-centred systems development, 15 credits
- or
- Electronic business and enterprise systems, 15 credits
- and
- Information systems – one-year master's thesis, 15 credits

Degree of Master (120 credits)

Semester 1

- English for IT professionals, 7.5 credits
- Rules-as-Code applications, 7.5 credits
- Research perspectives on AR and VR (augmented and virtual reality), 7.5 credits
- Planning and communicating an IS research project, 7.5 credits

Semester 2

Either

- Co-design and user-centred systems development, 15 credits
- or
- Electronic business and enterprise systems, 15 credits
- and
- Optional courses in information systems, 15 credits

Semester 3

Optional courses totalling 30 credits. Recommended courses:

- Research project in information systems, 15 credits
- Research project in information systems, 30 credits
- Current research on information systems, 7.5 credits
- Scientific theory and methodology, 7.5 credits
- AI applications in law, 7.5 credits

Semester 4

- Information systems – master's thesis, 30 credits

Title of qualification

Degree of Master of Social Science (60 credits)

Main field of study: Information Systems

Degree of Master of Social Science (120 credits)

Main field of study: Information Systems

Credit transfer

According to the Higher Education Ordinance, Chap. 6, Sect. 6–8, students have the right to transfer credits and have prior learning recognised upon approval.

Further information

The local regulations for first and second cycle education at Karlstad University stipulate the obligations and rights of students and staff.

Previous versions of the programme syllabus have been approved:

9 December 2010, reg.no. FAK1 2010/193, applies from the autumn semester 2011

7 June 2012, reg.no. FAK1 2012/132, applies from the autumn semester 2012

7 February 2019, Reg.no HS 2019/44, applies from the autumn semester of 2019

15 December 2021, Reg.no HS 2021/948, applies from the autumn semester of 2022