UNIVERSITY OF SKÖVDE

TRANSLATION FROM SWEDISH

PROGRAMME SYLLABUS

Privacy, Information and Cybersecurity - Master's Programme

120 credits

Programme code: IICMA
Version number: 8.2
Valid from: 1 July 2026
Ratified by: Curriculum Committee for Informatics
Date of ratification: 12 June 2025

1. General information about the study programme

The study programme is provided by the University of Skövde and is named Privacy, Information and Cybersecurity - Master's Programme (Integritet, informationssäkerhet och cybersäkerhet - masterprogram). It comprises 120 credits and is a second-cycle programme. The main field of study is Informatics.

2. Entry requirements

A Bachelor degree of at least 180 higher education credits (equivalent to a Swedish kandidatexamen) within the fields of informatics or computer science or similar.

A further requirement is proof of skills in English, equivalent of studies at upper secondary level in Sweden, known as English 6 or English level 2. This is normally demonstrated by means of an internationally recognized test, e.g., IELTS, TOEFL, or an equivalent.

The entry requirements above are applicable for admission to the study programme. For further studies within the programme, the entry requirements for each course must be met. These entry requirements are specified in each separate course syllabus.

3. Study programme content

The program provides a broad and in-depth knowledge and understanding as well as substantial insight into the sociotechnical area of the subject area of informatics. The focus for deepening is privacy, information security and cybersecurity. Privacy is the science of how personal information should be protected both technically and administratively in order to safeguard personal integrity and not disclose sensitive information when processing personal data. Information security and cybersecurity focus on the preservation of information's availability, integrity and confidentiality through a risk-based approach. The program takes a holistic perspective on these themes, which involves studying different theories, methods and techniques in the themes respectively, but also at an overall level, link aspects of privacy with information security and cybersecurity and vice versa. The emphasis of the program is on data protection, information security management, network security and critical infrastructure.

The program has three main themes based on basic and broad understanding of the subject area of informatics and important basic knowledge for the themes such as network and system administration, method and system development as well as programming. With this basic understanding, knowledge and skills in these areas are deepened through theory and practice as well as in an independent project where the students themselves can formulate a problem and solution to a personal integrity, information security and/or cyber security issue. Application of analytical methods and the need for systematic information security and cybersecurity work with maintained personal integrity goes as a red thread through the program. The program ends with an individual degree project where the student is trained to identify and address an issue of privacy, information security and cybersecurity with a scientific approach. The student has the opportunity to start from a problem from the previous courses or alternatively formulate a new question based on the lessons learned.

The following courses are included in the program

Cybersecurity Operations G1F, 7.5 credits

Principles of Privacy, Information Security and Cybersecurity A1N, 7.5 credits

Practical cryptology A1N, 7.5 credits

Privacy A1N, 7.5 credits

Information Security Management A1N, 7.5 credits

Cybersecurity for Internet of Things and Critical Infrastructures A1N, 7.5 credits

Project in Privacy, Information Security and Cybersecurity A1F, 15 credits

Optional course, 7.5 credits

Optional course, 7.5 credits

Information Security Management - Research A1F, 7.5 credits

Digital forensics for incident response A1F, 7.5 credits

Master Degree Project in Informatics with a specialization in Privacy, Information Security and Cybersecurity A2E, 30 credits

4. General objectives

Objectives for education at the second-cycle level in The Higher Education Act

Second-cycle courses and study programmes shall involve the acquisition of specialist knowledge, competence and skills in relation to first-cycle courses and study programmes, and in addition to the requirements for first-cycle courses and study programmes shall:

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

5. Study programme objectives

Objectives for Master's Degree according to the Higher Education Ordinance

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.

Local Objectives for the Study Programme according to the University of Skövde

After completion of the study programme, the student should be able to demonstrate

- in-depth knowledge and understanding of the program's themes of privacy, information security and cyber security respectively, but also deepened knowledge and understanding of the relationships between these fields linked to the digitization of sustainable development.

6. Language of instruction

The teaching is conducted in English.

7. Degree qualification

Those who complete the programme's courses with a pass grade also comply with the requirements for Degree of Master of Science (120 credits) with a major in Informatics.

For students who have completed the studies completely according to the programme syllabus, "The studies have been conducted within Privacy, Information and Cybersecurity" is stated on the first page of the diploma. Exceptions from the requirement to study completely according to the programme syllabus are made in cases where a student has conducted studies abroad according to an approved plan. It must then be clear from the planning that the requirements for referral to education programs are met.

Degree certificates are issued after application. Information about how to submit an application can be found on the website of the University of Skövde.

8. Changes to the programme syllabus

The programme syllabus and its courses may be changed, within the framework of the objectives for the study programme.

9. Student influence

Student influence in the study programme is ensured by means of programme evaluations. The students are informed about the results of the evaluations and potential measures that have been taken or are planned, based on the course evaluations.

10. Additional information

Further information about the study programme, as well as national and local governing documents for higher education, is available on the website of the University of Skövde.