JÖNKÖPING UNIVERSITY
School of Engineering

PROGRAMME SYLLABUS

User Experience Design (one year master), 60 credits

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Programme Code:	TAUE1	Programmestart:	Autumn 2025
Confirmed:	Feb 01, 2025	Education Cycle:	Second-cycle level

Title of qualification

Degree of Master of Science (60 credits) with a major in Informatics specialisation in User Experience Design

Filosofie magisterexamen med huvudområdet informatik inriktning User Experience Design

Programme overview

Main field of study

The main field of study Informatics is defined as the study of the creation and use of information systems. Studies in the field include:

- IT systems, IT applications, IT infrastructures, and IT-based services and products
- Development and change of IT support
- Use of IT in organizational contexts, both public and private
- Humans in professional and non-professional settings, such as developers and users of IT
- The mutual influence between IT and individuals, organizations, and society
- Conditions for and effects of IT design and use

Scientific studies in Informatics are conducted from both positivist and interpretative perspectives. Common research approaches within the field include case studies, interviews, surveys, action research, participatory design, and design science. The predominant methods for collecting empirical data are interviews, focus groups, surveys, observations, and document studies. Informatics takes an interdisciplinary approach, often incorporating theories from reference disciplines such as business administration, economics, sociology, and psychology.

Informatics is distinct from computer and systems science as well as cognitive and information science. Computer and systems science studies information technology from a technical and natural sciences perspective, while cognitive and information science focuses on human cognitive interaction with information systems.

Through studies in informatics, knowledge and understanding are developed regarding how IT is used and creates value in organizations. The ability to analyze, assess, and manage complex strategic IT-related issues and situations is established. Additionally, skills are developed in applying methods for leadership and management of and controlling complex IT projects in various organizational contexts, as well as eliciting and defining requirements, procuring, implementing, and evaluating the usability of information systems to solve problems for individuals, organizations, and society.

Background

Digital outputs have become increasingly pervasive and now form the strategic backbone of most businesses. This development creates a clear need for professionals that have more in-depth understanding of human properties in design and technology.

Since the emergence of the iPhone, user experience design has become central to making our digital interactions more functional, productive, and inspiring – thus raising our expectations when we use any computerized system. Furthermore, emerging technologies break existing user mental models and generate new ones. For designers and developers – when building products and systems that work well for people – this means continuously learning new technologies and their value in different contexts.

This master programme in User Experience Design helps students acquire the skills required to create competitive and innovative digital products.

Objectives
The programme is intended for students with a bachelor's degree in informatics, computer science, computer engineering, interaction design or similar. By providing in-depth knowledge on human properties, and introducing students to new technologies, such as machine learning and recommendation agents, the programme will provide them with skills to design and develop digital products that effectively address user needs and enhance the user experience.

Post-graduation employment areas
This master programme in User Experience Design prepares students for third-cycle courses and research projects, or for work in industry. With the experience provided by the programme, students will be able to undertake a variety of roles, such as: technical or design consultant or lead; product owner or manager; product designer; project manager; user (experience) researcher; and research and development engineer.

Post-graduation studies
A Master's degree qualifies to apply for further third-cycle education leading to a licentiate or doctoral degree.

Objectives

General learning outcomes
On completion of the programme, the student must fulfil the learning outcomes for the degree of master (60 credits) as laid down in the Higher Education Ordinance:

Knowledge and understanding
1. 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
2. demonstrate specialised methodological knowledge in the main field of study.

Competence and skills
3. demonstrate the ability to integrate knowledge and analyse, assess and deal with complex phenomena, issues and situations even with limited information,
4. 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,
5. 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
6. demonstrate the skills required for participation in research and development work or employment in some other qualified capacity.

Judgement and approach
7. 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,
8. 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
9. demonstrate the ability to identify the personal need for further knowledge and take responsibility for his or her ongoing learning.

Programme-specific learning outcomes
On completion of the programme, the student must also fulfil the following programme-specific learning outcomes:

Knowledge and understanding
10. display knowledge of the concepts and techniques of user experience design,
11. demonstrate comprehension of web personalization, and
12. show familiarity with the content of ethical discourse about digital technologies and relevant legal frameworks.

Competence and skills
13. demonstrate skills of managing a design process for products or services that results in a good user experience on different Web and mobile platforms, and
14. demonstrate the ability to work in teams during development of a product for the needs of specific users, organizations, or businesses.

Judgement and approach
15. demonstrate the ability to assess how usability and user needs contribute to a successful user experience, and

16. demonstrate the ability to ground the design of products within a business strategy and its deployment to market.

Contents

Programme principles

Instruction is in the form of lectures, seminars, exercises, laboratory sessions and project work. All courses are held in English. All final course examinations are in English.

The teaching approach in the programme is based, to a large extent, on learning from real-life scenarios and group learning. Lectures and Labs often include examples from real projects, which put the theoretical material into a practical context. In course assignments students work in groups of several members to plan and implement a solution to a problem based upon a real-life case. This lays the ground for learning communication and leadership within a group. The resulting solution is reported in both written and oral form.

The programme includes an independent degree project worth 15 higher education credits. Students, individually or in groups of two, prepare and present an assignment in the field of User Experience Design, applying the knowledge accumulated during the programme and demonstrating the acquired skills. The degree project is carried out during the last term of the programme and can be done in close collaboration with a company or an organisation.

Research basis

Within the Department of Computer Science & Informatics there is a strong focus on research related to human-computer interaction. This is the discipline that is concerned with how humans use and are affected by information technologies, and with how to create solutions that are both accessible and useful in everyday life. As computing becomes ubiquitous, almost every aspect of modern life involves some form of interaction with digital technologies.

Hence, this makes the area of human-computer interaction a multi- and interdisciplinary field of study that draws on principles from different subjects, such as: computer science and informatics (e.g., web security, artificial intelligence, recommender systems), social sciences (e.g., psychology), arts, and many more.

The programme is also closely connected to the thematic areas of Jönköping University's SPARK Research Environment, especially to the thematic area TA5 – Digitalization for smart products and services. In this TA one of the core areas is digitalization and digital transformation of products and services (Value propositions). In this area, important dimensions handle in terms of opportunities and challenges are customer demands, user experience, process, staff and competencies, and technology. This also serves as a foundation to facilitate research between schools and departments, as well as with the industry and the public sector.

Equal terms, gender equality and diversity

The School of Engineering (JTH) strives in all its activities to ensure that all individuals are given equal opportunities and treated equally. At both the JU and JTH levels, this is reflected in governing documents concerning organizational and personnel matters, the establishment and delivery of programmes and courses, as well as the monitoring of educational quality. At JTH, student influence is also ensured through student representation in various educational and industry councils.

The User Experience Design master's program emphasizes equal terms, gender equality, and diversity as essential foundations for inclusive system development and innovation throughout its courses. Grounded in informatics, the program integrates these values with a focus on quality development, preparing students to design sustainable, user-centered solutions that address diverse societal needs.

Programme progression

The programme starts with the *Cognitive Psychology in HCI* course in which students will get in-depth knowledge on how the mind works. It focuses on how the interactions of thinking, emotion, creativity, and problem-solving abilities affect how and why users think and behave the way they do. In parallel to this there is the *Web Personalisation* course. This course provides knowledge of different personalisation methods and strategies to move away from a one-size-fits-all approach when creating digital solutions. Personalisation includes the utilization of data and artificial intelligence tools to reveal preference patterns, as well as the use of psychological theories to infer personal preferences. *Consumer Behaviour in Online Contexts* aims to provide knowledge on different models, theories, and principles that can be used to understand the reactions of consumers to digital products to improve the user experience. *Quantitative Methods for HCI* provides students with additional knowledge on quantitative methods and analyses to properly deal with quantitative data. Furthermore, the course prepares students for the Final Project Work course to be able to

conduct more advanced research studies. *Digital Ethics and Privacy* covers different legal frameworks and ethical discourse within digital technologies and provides decision-making guidelines in the context of ethics and privacy. As the final course in the programme, a *Strategic Design and Leadership* course is offered to train students on how to take on a leadership role, drive innovation, and develop competitive advantages using strategic design methodologies.

During their *Final Project Work* the students are expected to enhance and deepen their knowledge on modern trends and discoveries in User Experience Design, as well as to contribute with their own results to this area. The *Final Project Work* requires students to exercise their ability to understand a problem, to identify different solutions to the problem, and to choose an appropriate solution by estimating the solution's business impact.

Courses

Course changes can occur, as long as they do not substantially affect the programme's content and learning goals.

Mandatory courses

Semester	Course Name	Credits	Main field of study	Specialised in	Course Code
1	Quantitative Methods for HCI	7.5	Informatics	A1N	TKHR23
1	Cognitive Psychology for HCI	7.5	Informatics	A1N	TKPR24
1	Consumer Behaviour in Online Contexts	7.5	Informatics	A1N	TKTR24
1	Web Personalisation	7.5	Informatics	A1N	TWPR21
2	Final Project Work in Informatics	15	Informatics	A1E	TEIT22
2	Digital Ethics and Privacy	7.5	Informatics	A1N	TEKR23
2	Strategic Design and Leadership	7.5	Informatics	A1N	TSLR25

Teaching and examination

The academic year is divided into two semesters, and the semesters into two study periods. In each study period two courses are generally taken in parallel. Assessment is part of each course or module. Modes of assessment and grades are shown in each course syllabus.

Entry requirements

The applicant must hold the minimum of a bachelor's degree (i.e., the equivalent of 180 ECTS credits at an accredited university) with at least 90 credits in Informatics, Computer Engineering, Computer Science, or equivalent. Proof of English proficiency is required.

Qualification Requirements

To obtain a Degree of Master of Science (60 credits) with a major in Informatics, specialisation in User Experience Design, students must complete a minimum of 60 credits in accordance with the current programme syllabus.
In addition a Degree of Bachelor of Science in Engineering/Degree of Bachelor of Science or an equivalent Swedish or foreign qualification is required.

Quality Development

At JTH, systematic quality assurance is carried out within JU's established quality system. This system, based on the requirements of the Higher Education Act, the Higher Education Ordinance, and the Standards and Guidelines for Quality Assurance in the European Higher Education Area, has been reviewed and approved by the Swedish Higher Education Authority.

Active and continuous course evaluation, including student feedback through course surveys, forms one of the cornerstones of this system. Annual programme evaluations and student representation in JTH's various educational and industry councils are two additional examples.

Other Information

Admission is under ‘Admission regulations for first- and second cycle courses and study programmes at Jönköping University (Admission regulations)’.

This syllabus is based on ‘Regulations and guidelines for first-, second- and third-cycle education at Jönköping University’.