Høyskolen
Kristiania

Programme Description

Master of Science in Information Systems: Digital Business Systems

Full-time

On-Campus

120 ECTS credits

Valid from 2025

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1.Introduction

Master of Science in Information Systems is an advanced programme for students who aim for a career in management of business systems. School of Economics, Innovation and Technology at Kristiania University College educates competent and socially responsible IT professionals, who work in many roles, such as CIOs, project managers, business analysts, consultants, systems developers, and IT security experts. The programme is research based and is taught by active researchers. The programme is also developed in close co-operation with business and public organizations. Information Systems (IS) is both a professional discipline and an academic field, aiming to bridge the technical capabilities of IT with business needs. As an academic discipline, IS investigates a wide range of topics, such as IS strategy and management, business systems, IS development methods, user behavior and usability. It also investigates more theoretical issues, such as the relationship between technology and the social world, and the dynamics of the information society.

Digital Business Systems (DBS) are the Enterprise Applications that are commonly and widely used by public and private organizations worldwide. DBS support the various business functions on all levels of organizational structures. They support the business processes of the organization and provide digitised process and transaction sharing, monitoring, and reporting capabilities. DBS also provide innovative digital solutions to organizational, societal, and sustainability challenges. The successful employment of information systems concepts in the development or implementation of digital business systems depends on the understanding of the several types of systems and technologies, and their potential impact on organizations, people, societies, and sustainability.

The Master of Science in Information Systems specialization in Digital Business Systems will provide students with the necessary knowledge, skills, and competence to effectively develop DBS adoption strategies and put them into action. This specialization explores the role of Information Systems research alongside existing Digital Business Systems state-of-the-art, concepts and theories, and considers how these functions within the wider organizational strategy. Students will learn to analyse new and complex business challenges, investigate the changing nature of business in the context of emerging technologies and sustainability, identify opportunities for strategic use of information systems, and develop implementation plans that align with organizational objectives. The courses include Introduction to IS research, Enterprise Systems, Digital Strategy and Business Models, Business Intelligence and Dashboards, and Information Risk and Security, and underpins this by enhancing students' core information systems understanding, including Ethics, Sustainability and Society, Research Methods, Proposal Development, tailoring them to meet the needs of this specialization.

The awarded title is **Master of Science in Information Systems.**

A non-comprehensive list of potential job opportunities may include; Business Analysts, ERP Consultants, CRM Consultants, Project Managers within private and public organizations. After completing the master's programme, the candidate is also formally qualified for a PhD study in IT at Kristiania University College, and other institutions with a related area of research.

1.1 Prerequisites

Applicants must meet the following requirements:
- Bachelor's degree in IT, management, economics, e-business or marketing, with an average grade of minimum C, equals minimum 2,7 ECTS. Relevant practices, or other special considerations, may in some cases weigh up for non-compliant grade requirements.
- The applicants must also write an motivational letter of 400-500 words in English.

2. Objective

Learning outcomes at the Master of Science in Information Systems programme level:

Knowledge

The candidate...
- has an advanced knowledge of information systems as a research field, in terms of theories, knowledge claims, research methods and professional standards
- can reflect on how information systems contribute to business, decision-making activities and societal aims

Skills

The candidate...
- has acquire practical skills in analysing complex IS problems, designing or recommending solutions, and in measuring and evaluating results
- has strong skills in applying research methods and techniques

Competence

The candidate...
- can take responsibility for conducting independent research and/or development project at a high standard and in accordance with norms for research ethics
- can choose the appropriate research approach, to choose or develop a solution that meets the organizational requirements, provide value while considering sustainability goals
- can handle organizational relationships ethically, professionally, and to evaluate and communicate the results in a systematic way

Learning outcomes at specialization level in Digital Business Systems

Knowledge

The candidate...
- can apply their advanced knowledge in providing digital solutions to business and organizational problems
- can reflect on how information systems and technology infrastructures can contribute to business, societal, and sustainability aims
- can describe and discuss key theories on the role of information systems and technologies for individuals, groups, organizations, and society
- can analyse the role of information risk and security in an organization

Skills

The candidate...
- can conduct an independent strategic analysis of an organization and assess alternative solutions
- can critically evaluate information systems in relation to organizational strategies and requirements
- can manage large digital business systems' implementations

Competence

The candidate…
- can take the responsibility to contribute to an IT strategy or system innovation process in organizations
- can conduct diligent and ethical information systems research and contribute to the body of knowledge.
- can communicate research and professional findings in a professional business and ethical manner

3. Structure

For full-time students first year offers eight courses. For part-time students these eight courses are taken over two years. The second year (third year for part-time students) offers a semester with possibility for student exchange or electives (30ECTS), and a final semester with Master Thesis.

Semester	Master of Science in Information Systems: Digital Business Systems - Full time			
1. semester	Introduction to IS Research 7,5 ECTS	Enterprise Systems 7,5 ECTS	Digital Strategy and Business Models 7,5 ECTS	Ethics, Sustainability, and Society 7,5 ECTS
2. semester	Information Risk and Security 7,5 ECTS	Business Intelligence and Dashboards 7,5 ECTS	Research Methods 7,5 ECTS	Proposal Development 7,5 ECTS
3. semester	Elective 30 ECTS			
	Exchange 30 ECTS			
4. semester	Master Thesis 30 ECTS			

Table 1. Program structure – full-time
There may be changes in which electives/elective program courses are offered.
The courses are taught as moduels, meaning that the students usually will complete one module before starting the next.

Specialization course	Subject area course	Elective	Exchange

3.1 Academic progression

The academic progression presents the overall model for the Master of Science in Information Systems specialization in Strategic Information Systems. The first year provides the students with knowledge and skills in IS research, Enterprise Systems, Digital Strategy and Business Models, Business Intelligence and Dashboards, and Information Risk and Security, Ethics, Sustainability, and Society, Research Methods, and Proposal Development.

The second year gives students the opportunity to deepen within elective subjects and/or exchange to one of the international institutions that this programme has an agreement with. The last semester has a stronger focus on competence, aiming at synthesizing knowledge and skills into the ability to conduct a Master Thesis. During the work on the Master Thesis the student can demonstrate expertise in their chosen research area. Students will acquire specialized problem-solving skills, being able to plan and conduct the steps in the research and/or development process at a high methodological standard. When working with the Master Thesis, a close relationship with a company is recommended.

3.2 Courses

Course name	Credits	Description
Introduction to IS Research	7,5	The course introduces the IS research field. Students will gain advanced knowledge of the key concepts and theories of IS research. They will acquire specialised problem-solving skills, being able to analyse and synthesize a research case. They shall take responsibility to a literature review of a specific IS topic. Central topics includes Information Systems as a research field, IS development, IS innovation, IS as sociotechnical and complex systems, Introduction to research methods in IS, Basic concepts and theories in IS, Literature reviews and writing style.
Enterprise Systems	7,5	The course will provide theoretical and practical exercises as regards one of the following categories of Enterprise Systems (ES): Enterprise Resource Planning (ERP), Customer Relationship Management (CRM) and Data Warehousing.
Digital Strategy and Business Models	7,5	This course develops students' understanding of the digital disruption and the changing rules of competition and strategy. The students will learn why business model innovation is crucial for companies pursuing digitalization. Students will gain advanced knowledge of key theories and concepts of strategic use of IS. They will acquire specialised problem-solving skills, being able to conduct a strategic analysis based on accepted frameworks. They shall take responsibility to plan and accomplish an IS strategy process for a case organization, with a proposed architecture. Central topics includes IT strategizing, IT strategy alignment, Business Process Modelling, Business Model Innovation.
Ethics, Sustainability and Society	7,5	The main aim of this course is to provide students with the fundamental knowledge of ethics and sustainability necessary for responsible innovation and the development of new information technologies (IT) in the modern society. The central topics include the role of ethics in responsible innovation and IT development; social, economic, and environmental impacts of innovations and new ITs (Information Technology); and how IT development and innovation can contribute to achieving the UN Sustainable Development Goals. In covering ethical and sustainability issues, the course addresses the perspectives of various stakeholders at the individual level (IT developers, innovators, consumers, investors), the organizational level (commercial, public, and non-governmental organizations), and the societal level (local and regional communities, nations, international society). Group work on viable solutions to real-life ethical and sustainability challenges constitutes an essential part of the course.

Proposal Development	7,5	The overall objective of this course is to help students conceptualize and prepare a timely and relevant research proposal, and to nurture a sense of inquisitiveness and active participation in research. The course aims at offering insight into the process behind a successful research project. It has an applied approach that involves collaborative and reciprocal partnerships between the university (faculty, staff, and/or students) and external communities for the mutually beneficial exchange of knowledge and resources. The research proposal forms the basis for the master thesis and the allocation of supervisor(s).
Information Risk and Security	7,5	Students will gain advanced knowledge of key concepts, laws, standards, technologies and ethics within IT security. They will acquire specialised problem-solving skills, being able to perform a comprehensive information risk analysis, and suggest the necessary controls. They shall take responsibility to conduct the design of an IT security plan for a case organization and assess the quality.
Business Intelligence and Dashboards	7,5	Business Intelligence (BI) is highly important for making good decisions in organizations. Students will gain advanced knowledge of the art and process of decision-making, as well as the BI process and the end- user tools such as reports, visualizations and dashboards. They will acquire specialised problem-solving skills and hands-on experience with a leading BI tool. They shall take responsibility to conduct a complete BI process and evaluate its business value.
Research Methods	7,5	Research is a cyclical process where new and carefully planned investigations build and extend on established work. The aim is to provide students with a fundamental understanding of research as a conceptual, empirical, and practical approach to gathering new insight and knowledge. The content provides a broad overview of how researchers work within the fields of economy, innovation, and technology. It presents students with relevant methods from these domains, along with their possibilities and limitations. Students will learn a systematic approach to empirical investigation, including literature search, research design and methodology, qualitative and quantitative analyses, and the presentation and evaluation of results. At completion of the course, students will be able to study and interpret existing research on a topic and suggest approaches to broaden or deepen knowledge within a given topic.

3.3 Elective subjects

Within the students' 3rd semester (5th for the part-time students), they will have to choose from electable course in the programme, which will give them the opportunity to further engage in in-depth knowledge of a topic of interest, or to broaden their scope and area of knowledge by selecting a related module that expands their horizon. What topics that can

be chosen may vary from year to year. The concrete topics are presented and published on the Kristiania Website and through the learning platform in the spring, in the students' 2nd semester (4th for the part-time students), together with the deadline for enrolment in individual electable subjects.

3.4 Master Thesis (30 credits)

The aim of this course is to provide the student with an opportunity to develop systematic understanding and critical awareness on the solution of a relevant problem in the student's focal area. Students will gain advanced knowledge of the research process at master level in information systems, including a deep knowledge of selected theories. They will acquire specialized problem-solving skills, being able to plan and conduct the steps in the research or development process at a high methodological standard. They shall take responsibility to conduct a well planned and executed project at master level.

On a more detailed level, the student will, based on observations of the industry and the existing body of knowledge, develop a research question. Students will also be able to connect their Master Thesis work to one of the ongoing research projects at the School of Economics, Innovation and Technology. Furthermore, the student will conduct an extensive literature review to map what is already known about the chosen research question. Building on this, the student will carry out the research. This usually includes collecting his or her own data, which can be done by means of surveys, interviews, experiments, observations, and more. The data are to be analyzed in a thorough manner before conclusions can be made. Lastly, the student must reflect on ethical issues, limitations, future research and the value of the contributions of the conducted master thesis.

Course	ECTS	Description
Master Thesis	30	The master thesis is a research project in which students will apply the knowledge acquired during their studies. It is a crafted scholarly document presenting research questions and original arguments based on scientific methods under the guidance of an advisor. The thesis gives the student the opportunity to demonstrate expertise in their chosen research area. Students will acquire specialized problem-solving skills, being able to plan and conduct the steps in the research and/or development process at a high methodological standard. They shall take responsibility for conducting a well planned and executed project.

Table 5: Master Thesis overview.

4. Teaching methods and assessment

4.1 Pedagogical platform and teaching methods

The programme uses several varied forms of teaching to encourage learning:

- Lectures, to introduce theoretical issues and domain knowledge
- Seminars and group work, to give the students the opportunity to discuss different perspectives, integrate with previous knowledge, and practice analytical assessments with provided case materials
- Practical assignments, simulations, and group work
- Directed and student-selected readings, to initiate an interest in a domain of
- knowledge and to develop solid knowledge base
- Oral presentations, to develop personal communication skills and promote
- team-work environments
- Essay and thesis writing, to synthesize knowledge and present
- analyses and communicate results
- Supervision, to provide detailed feedback and discussion of students' projects in close interaction with Kristiania University College researchers

4.2 Forms of assessment

Regarding assessment forms, the students usually have written home exam during the modules. The objective of these assessment forms is to prepare and train the student for writing the master's Thesis. In addition, some oral presentations, multiple choice exams, individual written exams are examples of other assessment forms. There is one assessment in each module. Some modules do also have individual or group compulsory assignments. For the master's Thesis, the assessment consists of one written essay (The Master's Thesis report) and an oral defense.

5.   Internationalization and student exchange

With reference to *Studietilsynsforskriften* of February 2017 (§2-2, sections 7 and 8), the study has arrangements for internationalization and international student exchange.

5.1 Internationalization

In this context internationalization is understood as placing the study programme in an international context and that the students are exposed to a multitude of perspectives.

All of the reading materials and lectures are given in english, and the study uses both norwegian and international cases. The studends who wish to do so can write their Master Thesis in english as well as choose an international case for their reseach. The program uses international lectures and guest lecturers. Our lectures also conduct reseach with international coauthors and play an active role in both national and international confrences.

For specific internationalization schemes, see the subject description of the study.

5.2 International student exchange

As regards to arrangements for international student exchange, Kristiania University College has the following mobility program;
- Nordplus in the Nordic region or the Baltic States
- ERASMUS + in Europe
- "Study Abroad", for students in and outside Europe

Kristiania Univeristy College has agreements on student exchanges and academic relevance secured by the academic field of study. Exchange courses from partners are approved by academic supervisors, for admission to the program, with an equivalent of 30 credits.

For nominations for student exchange, requirements are set for grades and motivation applications. For some study programmes there are requirements for documentation of creative work / portfolios.

For students at Master of IS: Digital Business Systemstudent exchange is possible during the third semester (5th semester for part-time students). While on exchange the student will be able to start preparing for their master thesis with an advisor from Kristiania University College. For outgoing students, Kristiania University College, has established student exchange agreements with the following institutions:

- Kingston University, UK: Master Programme
- Arcada, Finland: International Business Management
- Seoul, South-Korea: Seoul National University of Science and Technology
- England: University of Hertfordshire, UK

Changes to approved universities may occur. Information about possible exchange stays for the relevant year is therefore published online and on the learning platform.