Course Information 2018 - 2020

Master of Information Systems:
Management and Innovation
Institutt for teknologi / Department of Technology
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1 Master of Information Systems: Management and Innovation

1.1 Content

Master of Information Systems is an advanced programme for students who aims for a career in Management or business systems. The Department of Technology at Hoyskolen Kristiania 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 organisations.

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 behaviour 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.

1.2 Name


1.3 Programme + introduction

The programme is run over two years (full time) or three years (part time). The first year offers eight courses (four in part-time mode). The second year offers two courses, and a Master Dissertation. The awarded title is: Master of Information Systems.

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1.4 Objective

Knowledge
Candidates will have an advanced knowledge of information systems as a research field, in terms of themes, theories, knowledge claims, research methods and professional standards. They will be able to apply this knowledge, and to reflect on how information systems contribute to business and societal aims. They will be able to describe and discuss key theories on the role of information technology for individuals, teams, organisations and society, and to understand the role of information technologies in innovation processes.

Skills
Candidates will acquire practical skills in analysing complex information systems problems, designing or recommending solutions, and in measuring and evaluating results. Candidates will also have strong skills in applying research approaches and methods. They will be able to analyse business cases and assess alternative solutions, and to critically evaluate information technology in relation to organising and strategizing.

Competence
Candidates will take responsibility for solving complex tasks and conducting a research project at a high standard. This includes the ability to choose the appropriate research approach and methods, to choose or develop a solution, to handle relationships ethically and professionally, and to evaluate and communicate the results in a systematic way. They will be able to take the responsibility to participate and contribute to an information technology strategy or innovation process in an organization, to assess results in relation to information systems research, and communicate findings in a professional and ethical way.

1.5 Central topics

The first year provides the students with knowledge and skills in IS research, project management, IT governance, emerging technologies, innovation, IT security, IT strategy and architecture and innovation networks.

The second year has a stronger focus on competence, aiming at synthesising knowledge and skills into the ability to conduct projects. The shared courses of the second year prepare the student for the Dissertation. During the Dissertation the student will be able to draw on and integrate all these resources. During the third semester an internship at a company is recommended.

1.6 Job opportunities

IS Masters work as CIOs, IT managers, business developers, software developers, business analysts, consultants and IT security staff.
1.7 Exchange
For outgoing students, Høyskolen Kristiania has established student exchange agreements with the following institutions:
- England: University of Hertfordshire, UK
- England: Kingston University - Master Programme
- Arcada, Finland: International Business Management
- Seoul, Sør-Korea: Seoul National University of Science and Technology
- New Zealand: Otago Polytechnic New Zealand (1 student only)

1.8 Further studies
After completing the Master’s programme, the candidate is formally qualified for a PhD study in a related area of research.

1.9 Prerequisites
A Bachelor degree within related areas such as IT, management, economics, e-business, or marketing.

1.10 Teaching methods
The programme uses a number of varied forms of teaching in order 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 assessment with case materials.
- Practical assignments and lab work, to develop hands-on technical skills
- Directed and student-selected readings, to develop a solid knowledge base
- Oral presentations, to develop personal communication skills
- Essay and dissertation writing, in order to synthesise knowledge and present analyses and results
- Supervision, to provide detailed feedback and discussion of student projects in close interaction with Høyskolen Kristiania researchers.
2  First year of study 2018-2019

2.1  MS110 Introduction to Information Systems Research

ECTS credits: 7,5  
Teaching language: EN

Programme of study: Compulsory course at Master of Information Systems - Digital Business Systems; Master of Information Systems - Management and Innovation

Required prerequisite knowledge: None
Recommended previous knowledge: None.
Teaching period: The course is taught in 1. semester

Course contents
The course provides an introduction to 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.

Learning outcome
Knowledge: At completion of the course the candidate will be able to
• describe the main research streams of IS research
• describe key theories and frameworks on main IS topics, such as: IS and organizational change, IS adoption, IS development, and strategic use of IS.
• discuss key issues and challenges of IS as a professional field

Skills: At completion of the course the candidate will be able to
• analyse a business case with a framework
• find and assess relevant literature in research databases

Competence: At completion of the course the candidate will be able to
• compare and synthesise different research contributions
• write a literature review of a specific IS topic
2.2 MS220 Social Media Management

ECTS credits: 7,5
Teaching language: EN
Programme of study: Compulsory course at Master of Information Systems - Digital Business Systems; Master of Information Systems - Management and Innovation
Required prerequisite knowledge: None
Recommended previous knowledge: None.
Teaching period: Autumn
Course responsible: Kjeld Hansen

Course contents
This course will provide the students with knowledge and skills on strategic adoption and use of social media for business purposes.

Students will gain knowledge in social media concepts and theories, technologies, and ethical issues. They will also acquire practical skills in design, implementation and evaluation of a social media strategy in an organization.

Learning outcome
Knowledge: At completion of the course the candidate will be able to
• explain key concepts and theories within social media management
• describe the adoption and use of social media for business purposes, such as strategy, innovation, dynamic knowledge generation, product development, human resource management, marketing and customer relationship
• demonstrate critical awareness of ethical issues in use of social media technologies

Skills: At completion of the course the candidate will be able to
• describe key issues and opportunities for a social media strategy in an organization
• design, plan and implement a minor social media project, for example developing a strategy for a specific purpose, product innovation, small marketing campaign or analysis, a HRM search or a knowledge experiment.
• Evaluate the results and business value of a social media project

Competence: At completion of the course the candidate will be able to
• develop, implement and evaluate a social media strategy in an organization
3.3 MI110 Innovation – Concepts and Perspectives

ECTS credits: 7,5
Teaching language: EN
Programme of study: Compulsory course at Master of Information Systems: Information Systems Management and Innovation
Required prerequisite knowledge: None
Recommended previous knowledge: None
Teaching period: The course is taught in 1. semester
Course responsible: Ben Eaton

Course contents
The course aims at providing insight into theoretical and practical aspects of innovation. Students will gain advanced knowledge of key concepts and theories of IT-supported innovation. They will acquire specialised problem-solving skills, being able to analyse innovation cases using different models. They shall take responsibility to conduct a review of the current state-of-the-art in innovation theory.

Central topics includes innovation theories and concepts, digital innovation, service innovation and innovation in organizations.

Learning outcome
Knowledge: At completion of the course the candidate will be able to
• demonstrate advanced knowledge of innovation theories, concepts and frameworks
• demonstrate advanced knowledge on the relationship between innovation and IT, at organizational and societal levels
• identify key characteristics and theories of digital innovation

Skills: At completion of the course the candidate will be able to
• analyze and assess innovation cases in business, using an appropriate framework
• analyze and assess innovation cases in the public sector, using an appropriate framework

Competence: At completion of the course the candidate will be able to
• discuss the theoretical issues of IT-based innovation
• critically evaluate the current state-of-the-art in innovation theory
2.4 MI121 IT Strategy and Architecture

ECTS credits: 7.5

Teaching language: EN

Programme of study: Compulsory course at Master of Information Systems: Information Systems Management and Innovation

Required prerequisite knowledge: None

Recommended previous knowledge: None

Teaching period: The course is taught in 1. semester

Course responsible: Knut H. Rolland

Course contents

This course highlights the importance of IS Strategy and architecture in contemporary organisations. 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, and to analyse the implications for a company's IT architecture. They shall take responsibility to plan and accomplish an IS strategy process for a case organisation, with a proposed architecture.

Central topics includes enterprise architecture, IT strategizing, IT strategy alignment and Business Process Modelling

Learning outcome

Knowledge: At completion of the course the candidate will be able to
• describe the key theories of business strategy and competitive advantage
• describe the theories of alignment between business and IS strategy
• explain the relationship between IS strategy and IT architecture

Skills: At completion of the course the candidate will be able to
• conduct a strategic analysis of a case organization
• analyse case studies, empirical evidence and research into the success and failure of IS strategy
• evaluate IS strategies for contemporary organizations
• develop and model enterprise architecture

Competence: At completion of the course the candidate will be able to
• suggest and evaluate an IS strategy with the appropriate architecture related to a business case
• demonstrate how to assess success (or failure) of an IS strategy
• critically evaluate the socio-technical interventions an IS strategy may inflict on an organization
2.5 MS120 IT Governance

ECTS credits: 7.5

Teaching language: EN

Programme of study: Compulsory course at Master of Information Systems - Digital Business Systems; Master of Information Systems - Management and Innovation

Required prerequisite knowledge: None

Recommended previous knowledge: None

Teaching period: The course is taught in 2. semester

Course responsible: Johan Magnusson

Course contents

This course will provide the student with an understanding of IT Governance as an important activity for securing business value of IT investments. Students will gain advanced knowledge of key theories and frameworks of IT governance. They will acquire specialised problem-solving skills, being able to select and use a governance framework to analyse a business case. They shall take responsibility to plan, organise and evaluate an IT governance process.

Learning outcome

Knowledge: At completion of the course the candidate will be able to
- explain key concepts and theories within IT Governance
- demonstrate critical awareness on the limitations of IT Governance frameworks

Skills: At completion of the course the candidate will be able to
- demonstrate a comparative understanding of the frameworks and standards within IT Governance like COBIT, ITIL and ISO 38500
- develop analytical skills related to creating and maintaining corporate information systems policy

Competence: At completion of the course the candidate will be able to
- identify and develop an appropriate governance model based on an analysis of a business case and its information portfolio
- demonstrate the ability to reflect (critically) on the value of IT Governance within a business
2.6 MS210 Agile Project Management

ECTS credits: 7.5

Teaching language: EN

Programme of study: Compulsory course at Master of Information Systems - Digital Business Systems; Master of Information Systems - Management and Innovation; Master of Applied Computer Science – Software integration

Required prerequisite knowledge: None.

Recommended previous knowledge: Introduction to Research.

Teaching period: The course is taught in 2. semester.

Course responsible: Knut H. Rolland

Course contents

Organizations need to develop project managers who can complete projects on time and within budget and this course addresses challenges such as the ability to manage projects and stakeholders, risk assessment and agile planning. Students will gain advanced knowledge of the key theories of project management and agile development. They will acquire specialised problem-solving skills, being able to plan and run a time-boxed iteration, and to use a project management tool. They shall take responsibility to conduct plan, organise and control an agile IS project.

Learning outcome

Knowledge: At completion of the course the candidate will be able to
- describe main theories of agile project management
- define key concepts related to project management
- identify and discuss agile project management methodologies

Skills: At completion of the course the candidate will be able to
- evaluate and assess risks in a project
- recognize and mitigate the early sources of failure in the project life cycle
- apply estimation techniques to a project requirements specification
- create and evaluate project plans in a project management tool (Atlassian Jira)
- run a time-boxed, incremental, iteration

Competence: At completion of the course the candidate will be able to
- understand the implications, challenges, and opportunities of organizational dynamics in project management
- critically evaluate project management teams in an organisation
2.7 MI210 Information risk and Security

ECTS credits: 7,5
Teaching language: EN

Programme of study: Compulsory course at Master of Information Systems - Management and Innovation

Required prerequisite knowledge: None
Recommended previous knowledge: Introduction to Research
Teaching period: The course is taught in 2. semester
Course responsible: Tommy Nysveen

Course contents
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 organisation, and assess the quality.

Learning outcome
Knowledge: At completion of the course the candidate will be able to
• demonstrate knowledge of the key theories and concepts in information risk and security
• describe the main IT security frameworks, such as the ISO27000 series
• demonstrate knowledge and understanding of security risk analysis and assurance techniques
• demonstrate knowledge of main attack mechanisms and techniques

Skills: At completion of the course the candidate will be able to
• conduct a systematic risk analysis, assessing probability and business impact
• design an IT security policy based on the risk analysis
• assess the quality of the security policy

Competence: At completion of the course the candidate will be able to
• be able to design and perform a risk analysis for an organization
• be able to formulate and communicate an appropriate IT security policy, based on a IT security framework
• design and evaluate a security policy
2.8 MI221 IS Infrastructures and Platforms

ECTS credits: 7.5

Teaching language: EN

Programme of study: Compulsory course at Master of Information Systems - Management and Innovation

Required prerequisite knowledge: None

Recommended previous knowledge: None

Teaching period: The course is taught in 2. semester

Course responsible: Knut H. Rolland

Course contents

The module introduces the students to large-scale information systems and these are designed, deployed and how such systems evolve in organizations and markets. The students are introduced to the IS literature on information infrastructures and multisided digital platforms and ecosystems. Especially, the module covers theories of path constitution, generativity, and installed-base cultivation in order to understand and explain the dynamics of information infrastructures and digital platforms. Based on these theoretical insights, the students gain competencies for designing and governing infrastructures and platforms.

Learning outcome

Knowledge: At completion of the course the candidate will be able to
- demonstrate advanced knowledge of theories on information infrastructures
- demonstrate knowledge of digital platforms and ecosystems
- identify key challenges of IT-based service innovation in a global context

Skills: At completion of the course the candidate will be able to
- analyse and assess complex infrastructure cases
- analyse and evaluate the success of multisided digital platforms, such as Google and Apple.
- develop concepts for new digital services and information infrastructures

Competence: At completion of the course the candidate will be able to
- discuss the theoretical issues of infrastructure theory and compare to other IS theories
- suggest and describe a strategy for growth of a business case infrastructure, and evaluate the strategy with infrastructure frameworks.
3 Second year of study 2019-2020

3.1 MS320 Research Methods

ECTS credits: 7,5
Teaching language: EN

Programme of study: Compulsory course at Master of Information Systems - Digital Business Systems; Master of Information Systems - Management and Innovation

Required prerequisite knowledge: None
Recommended previous knowledge: None
Teaching period: The course is taught in 3. semester
Course responsible: Asle Fagerstrøm

Course contents
The aim of the course is to provide a methodological foundation for the Master dissertation. Students will gain advanced knowledge of epistemologies and relevant methods for IS. They will acquire specialised problem-solving skills, being able to conduct a systematic data collection and analysis. They shall take responsibility to conduct the steps of a research project, according to professional and ethical standards.

Learning outcome
Knowledge: At completion of the course the candidate will be able to
• understand the main epistemologies relevant for IS research
• describe main research methods, such as surveys, case studies, design research and experiments
• assess critically and ethically the suitability of a method for a research issue

Skills: At completion of the course the candidate will be able to
• conduct a data collection process, both on qualitative and quantitative data
• conduct a data analysis process, both on qualitative and quantitative data
• present findings, appropriate for the target group

Competence: At completion of the course the candidate will be able to
• analyze a dissertation topic, and select and justify an appropriate research approach
• design and plan a research project
• assess issues and challenges on validity
3.2 MS401 Master dissertation

ECTS credits: 45

Teaching language: EN

Programme of study: Compulsory course at Master of Information Systems - Digital Business Systems; Master of Information Systems - Management and Innovation

Required prerequisite knowledge: Research methods course and first year of Master programme.

Recommended previous knowledge: None

Teaching period: The course is taught in 3. and 4. semester

Course responsible: Asle Fagerstrøm

Course contents

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 business-relevant relevant problem in the student’s focal area within the Information Systems discipline. Students will gain advanced knowledge of the research process at Master level in information, 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.

Learning outcome

Knowledge: At completion of the course the candidate will be able to
• demonstrate critical awareness of key theories within the focal area and the interface with related fields
• demonstrate critical awareness of key theories information systems and the interface with related fields
• identify IS related problems in business and public sector and assess an appropriate methodological approach

Skills: At completion of the course the candidate will be able to
• demonstrate advanced thinking skills (e.g., synthesis, reasoning, judgement and reflection)
• demonstrate a comparative understanding of the methods of research and evaluation relevant to both information systems research and the chosen business case of study
• conduct, report and evaluate a programme of research and solution related to a relevant problem within a business or public sector
• demonstrate competent project management skills (e.g., set objectives, plan and manage workload(s) and deliverables, monitor outcomes and manage time)

Competence: At completion of the course the candidate will be able to
• demonstrate the ability to integrate practical business experience with relevant IS theories to develop the student’s professional competence
• demonstrate the ability to reflect (critically) on content, approaches, techniques and tools
• contribute to professional knowledge and practice based on own original and high quality research and practice
take responsibility to conduct a well planned and executed project at Master level

3.3 MS310 Consulting and Leadership

ECTS credits: 7,5
Teaching language: EN
Programme of study: Elective course at Master of Information Systems - Digital Business Systems; Master of Information Systems - Management and Innovation; Master of Applied Computer Science – Software integration
Required prerequisite knowledge: None
Recommended previous knowledge: None
Teaching period: The course is taught in 3rd semester
Course responsible: Eivind Brevik

Course contents
This course focuses on the soft skills in management of information systems. Students will gain advanced knowledge of theories on leadership, change agents, ethics and required skills within IT-consultancy. They will acquire specialized problem-solving skills, being able to master the personal and organizational techniques required to participate in a change process, practicing leadership and developing professional skills within consulting. They shall take responsibility to conduct a minor consulting project thru an agreement, plan and evaluation.

Central topics includes consulting and leadership

Learning outcome
Knowledge: At completion of the course the candidate will be able to
• explain theories on organizational change and change management, leadership, ethics and human resources within knowledge based organizations

Skills: At completion of the course the candidate will be able to
• analyze case studies and research into the success (and failure) of IT-driven organizational change
• use oral, negotiational and analytical skills as a change agent within organizational development

Competence: At completion of the course the candidate will be able to
• plan, implement and evaluate a minor consulting project
• critically evaluate ethical issues related to leadership and consultancy