



JÖNKÖPING UNIVERSITY
Jönköping International Business School

PROGRAMME SYLLABUS
**Information Architecture and Innovation (Two Years), 120
credits**

Programmestart: Autumn 2019



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Information Architecture and Innovation (Two Years), 120 högskolepoäng

Programme code: JAIA8

Confirmed by: Dean 2018-02-28

Version: 2

Programmestart: Autumn 2019

Education Cycle: Second-cycle level

Title of qualification

Degree of Master of Science (120 credits) with a major in Informatics

Programme overview

The role of information systems is strategic in a society where information is expected to be produced, co-produced, remediated, consumed, and seamlessly shared across an infinite amount of connected environments. From sensors to ambient devices, from smartphones to autonomous cars, information systems are ubiquitous and so commonplace that they have become somewhat invisible. When shopping, traveling, paying taxes or exercising our rights, we always rely on some digital infrastructure to smoothly and successfully support our actions.

In such a landscape, organisations are dependent on their ability to shape products and services that can thrive in the complex environment created by the interplay of so many connected moving parts. Information systems and their applications are essential elements in any such strategy.

This programme addresses the new challenges and opportunities of a world seamlessly blending digital and physical and provides the theoretical and practical tools to understand and manage innovation and renewal through an information systems approach to socio-technical change.

Objectives

General aims

Second cycle education shall essentially build on the knowledge students acquire in first cycle education or corresponding knowledge. Second cycle education shall involve a deepening of knowledge, skills and abilities relative to first cycle education and, in addition to what applies to first cycle education, shall

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

Programme specific learning goals

Knowledge and Understanding

Graduates of the programme will have a general knowledge and understanding of Informatics principles and a specialised and considerably deep knowledge in Information architecture and innovation.

Corresponding Objectives:

Graduates of the programme will be able to

- demonstrate knowledge and understanding in Informatics as an academic discipline, including both broad knowledge in the field and a considerable degree of specialised knowledge of the relationship between information systems, socio-technical systems, innovation, and renewal;
- demonstrate knowledge and understanding of concept and theoretical perspectives related to socio-technical architecture and innovation in cross-contextual settings and in a global context;
- demonstrate an ability to solve problem and exercise analytical skills for activities related to socio-technical Information architecture and innovation in cross-contextual settings and in a global context:
- demonstrate insights in Informatics to balance societal and ethical issues;
- demonstrate specialised methodological knowledge specifically related to Information architecture and innovation and their role for the individual, the organisation, and society; and
- demonstrate understanding of issues of Information architecture and innovation and how they can be interpreted through different theoretical approaches:
- demonstrate capability to extend approaches from other disciplines to the area of information systems.

Skills and Abilities

Graduates of the programme will have acquired the skills to integrate knowledge critically and systematically and to analyse complex issues encountered for a career that deals with Information architecture and innovation, and be effective communicators of activities associated with these skills.

Corresponding Objectives:

Graduates of the programme will be able to

- demonstrate the ability to critically and systematically integrate knowledge and analyse, assess and deal with complex socio-technical phenomena, issues and situations associated with Information architecture and innovation, 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 an ability in speech and writing to report clearly on information systems issues and discuss their conclusions and the knowledge and arguments on which they are based, in dialogue with different national and international audiences; and
- demonstrate the skills required for participation in research and development work or to work autonomously in other advanced contexts, including in academic research related to information Information architecture and innovation.

Judgement and Approach

Graduates of the programme will understand the scientific, social, ethical, and personal responsibility aspects of practical work and research in informatics, including the role, use, and development of knowledge and the ethical aspects and possibilities of scientific endeavour.

Corresponding Objectives:

Graduates of the programme will be able to

- demonstrate the ability to make assessments in information systems, taking into account

- relevant scientific, societal 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 their need for further knowledge and to take responsibility for his or her ongoing learning.

Mission driven learning goals

Graduates of the programme will be equipped to contribute to the advancement of information systems practice in a global environment with particular emphasis on aspects of innovation and renewal.

Corresponding Objectives:

Graduates of the programme will be able to

- demonstrate in-depth knowledge about the role of information systems as an enabler of innovation
- demonstrate an ability to capture and analyse effects of information systems innovation in societal and organisational renewal.

The above is in accordance with the intended learning outcomes set for a two-year Master's degree in the Swedish Higher Education Ordinance and JIBS mission.

Contents

The master's programme Information architecture and innovation (Two-Years) is a programme in Informatics that addresses students with a background in informatics, information systems, business administration or computer science who want to increase their competence in utilizing information systems (IS) to support and foster social, organisational, and industrial innovation and renewal. The programme is structured around three key areas: strategy, management and project management; the nature of socio-technical systems and their role in innovation and renewal processes; the design and implementation of societal and organisational innovation and renewal through information systems.

The programme's overall purpose is to contribute to the education of a new generation of researchers and practitioners who want to understand the value of information systems in a post-digital society and develop the necessary skills to effectively implement and manage innovative information systems-based products and services in the global economy. The programme provides deeper knowledge for those already holding a bachelor degree in informatics, information systems, business administration, or computer science.

The programme includes eight mandatory courses held in the autumn and spring semesters of the first year. The first course, *1 Digital innovation*, provides an understanding of complexity and disruption in the context of socio-technical innovation. In the two courses *Project management in cross-cultural settings* and *Project in information systems* students learn how to approach, design and manage an information systems-based process in cross-cultural contexts and work on a project meant to provide a solution to a societal or organisational issue or need. The course *Theory and practice of socio-technical systems*, provides students with a holistic perspective over approaches, methods and models for the analysis and evaluation of information systems processes and for the design and management of innovative solutions, and of their effects and expectations for individuals, organisations, and society as a whole. The spring semester of the first year includes the courses *Information strategy* and *Design of Smart Enterprises*, focusing

on the role of Information architecture and innovation in organisational contexts. The course *Digital transformation and renewal* introduces students to a strategic view of information systems and the role they play in the larger ongoing processes of digital transformation and renewal. The first year of the programme is finalized by the course *Advanced research methods in information systems*.

The third semester consists of 30 elective credits and gives students the opportunity to build a custom-made profile in composition of course package and choice of university. The recommendation is to select master level courses within the specialisation but some complementary topics might be relevant given students' personal preferences and career plans. Students are recommended to choose courses within the fields of information systems, informatics, computer science, user experience, media communication, visual design, language, business administration, economics, statistics, economic geography, and commercial law. For international exchange, students choose the courses at a partner university in coordination with JIBS faculty, and accreditation of the courses is also conducted by JIBS faculty. An option to international exchange is to stay at JIBS during the third semester with the same limitation on types of courses as there are for students studying abroad. The elective semester at JIBS can include an academic internship of 7.5 or 15 credits as part of the course package. Students have the responsibility to find these internship themselves.

The fourth and last, semester consists of a 30 credit thesis course. The thesis should cover a topic of Information architecture and innovation.

All courses are taught in English. Due to the fact that Jönköping International Business School (JIBS) has an exchange programme including a number of partner universities, and the fact that this master programme and a number of other master programmes at JIBS are open to students from around the world, the courses have a diverse international participation of students. The international atmosphere is reinforced with international subject matter in this programme, in particular information, architecture and innovation.

After successfully completing the programme, students will be qualified to work with companies and organisations with a national and/or international presence due to having acquired good analytical skills and ability to think strategically in terms of both business and technology. The education is meant to prepare the students for work in organisational positions that require skills in managing socio-technical complexity and strategic decision-making wherever information systems are involved, e.g. project manager, product manager, strategic lead, chief information officer (CIO), or for entrepreneurial roles as a consultant or advisor in the field. The education is also meant to prepare students for research in information systems, innovation, and renewal.

Courses

Mandatory courses

Course Name	Credits	Main field of study	Specialised in	Course Code
Advanced Research Methods in Information Systems	7.5	Informatics	A1N	JARR29
Design of Smart Enterprises	7.5	Informatics	A1N	JDSR28
Digital Innovation	7.5	Informatics	A1N	JDIR28
Digital Transformation and Renewal	7.5	Informatics	A1N	JDTR29
Information Strategy	7.5	Informatics	A1N	JISR29
Master Thesis in Informatics (Two Years)	30	Informatics	A2E	JTIV27

Project in Information Systems	7.5	Informatics	A1N	JPIR28
Project Management in Cross-cultural Settings	7.5	Informatics	A1N	JPMR28
Theory and Practice of Socio-Technical Systems	7.5	Informatics	A1N	JTPR28

Elective courses

Course Name	Credits	Main field of study	Specialised in	Course Code
Entrepreneurial Creativity [†]	7.5	Business Administration	G2F	ENBN13
Entrepreneurial Growth [†]	7.5	Business Administration	A1N	ENOR23
Social Media and New Media [†]	7.5	Informatics	A1N	JSMR26
Understanding Digital Business [†]	7.5	Business Administration	A1N	JUDR26

Elective credits

1) For all 2-year master programmes, in the autumn of the 2nd year students have options for courses either at JIBS or through exchange. The elective courses noted during this period are default courses at JIBS if the students do not participate in exchange, academic internship or actively select other courses. The default courses at the optional semester are subject to change.

Programme overview

Year 1

Semester 1		Semester 2	
Period 1	Period 2	Period 3	Period 4
Digital Innovation, 7.5 credits	Project in Information Systems, 7.5 credits	Design of Smart Enterprises, 7.5 credits	Advanced Research Methods in Information Systems, 7.5 credits
Project Management in Cross-cultural Settings, 7.5 credits	Theory and Practice of Socio-Technical Systems, 7.5 credits	Information Strategy, 7.5 credits	Digital Transformation and Renewal, 7.5 credits

Year 2

Semester 3		Semester 4	
Period 1	Period 2	Period 3	Period 4
<i>Entrepreneurial Growth</i> [†] , 7.5 credits	<i>Entrepreneurial Creativity</i> [†] , 7.5 credits	Master Thesis in Informatics (Two Years), 30 credits	
<i>Understanding Digital Business</i> [†] , 7.5 credits	<i>Social Media and New Media</i> [†] , 7.5 credits		

Teaching and examination

To pass a course, the student needs to fulfill all the course requirements. Examination will be executed by written exam, oral exam, group work or term papers. Different methods of examination can be used within a single course. The student will be offered examination opportunities in accordance with document: Regulations and Guidelines for first, second and third cycle education at Jönköping University. Mandatory workshops and assignments can figure within the frame of the course.

All courses offered by JIBS will be graded according to the following six levels: A-E constitutes a pass and FX or F is equal to a fail. The grades Pass or Fail can also be used for selected examinations.

Prerequisites

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 60 credits in informatics, business administration, computer science, computer engineering, information engineering, or

equivalent. Proof of English proficiency is required.

Credit Transfer

Credit Transfer

A student who wishes to accredit earlier education and activities to be included in the programme degree, should contact the Academic Registrar.

Continuation Requirements

To be eligible for study abroad, the student should, at the time of the study abroad application, have completed at least 15 ECTS of the programme course credits scheduled prior to the study abroad.

The following requirements need to be met for students to proceed to the second academic year within the programme the student must not fall behind more than 30 credits.

Qualification Requirements

To obtain the Master of Science (120 credits) with a major in informatics, the student must complete the course requirements of at least 120 credits at the higher education level that were not used for the bachelor degree, with at least 90 credits overall in second cycle courses and at least 60 of those second cycle credits in informatics.

To obtain the Master of Science (120 credits) with a major in Informatics, with a focus on Information architecture and innovation the student must complete: (1) the requirements for the Master of Science (120 credits) with a major in Informatics (2) all mandatory programme courses as listed in the above Contents section, or their equivalent, and (3) a Master thesis (30 credits) in Informatics should cover a topic of Information architecture and innovation

Quality Development

Our cooperation with JSA, the student organisation, is crucial. This work is conducted on two levels, programmes and courses.

Programmelevel

On the programme level students elect student representatives for each track of the programme and each study year of the programme. The student representatives and the programme managers meet regularly to discuss courses and the progress of the programme. The representatives stay in contact with course coordinators to share the overall impression and student experiences from courses. In addition, the programme manager, student representatives, JSA and faculty meet annually to discuss the entire programme.

Courselevel

On the course level, student representatives from the course and the course coordinator meet shortly after the course has started. The purpose is to ensure that the course is working well and if necessary make minor changes. After each course is finished all students perform course evaluations in PingPong, and student representatives evaluate the course on the aggregate level and communicate with the programme manager and the course coordinator.

Other Information

Preparatory/foundation courses cannot be included/counted for the JIBS degree.

Additional information, regarding the programme, will be presented on JIBS homepage before each application period.