JÖNKÖPING UNIVERSITY
School of Engineering

PROGRAMME SYLLABUS

Informatics: New Media Design, 180 credits

Programmestart: Autumn 2016

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PROGRAMME SYLLABUS

Informatics: New Media Design, 180 credits

Informatik: Grafisk design och webbutveckling, 180 högskolepoäng

Programme code:	TGNM6	**Programmestart:**	Autumn 2016
Confirmed by:	Dean 2017-05-17	**Education Cycle:**	Basic level
Revised by:	Director of Education 2018-07-09		
Version:	1,2		

Title of qualification

Degree of Bachelor with a major in Informatics, specialisation New Media Design.

Programme overview

Background

A design strategy based on in-depth knowledge of digital media, interaction design, web architecture and visual communication is the key to being able to create and maintain satisfactory products and services for the benefit of both businesses and society. The New Media Design programme has been planned to provide multidisciplinary knowledge for various professions associated with the digital world of today and tomorrow, in which information, communication and technology come together to create these benefits.
The programme will provide knowledge about how the communicative message reaches the user in the intended manner. Creating digital platforms and other communication channels that are user-friendly and adapted to suit the target group are also important elements of achieving the objectives of the programme.
In addition, the programme will provide a scientific foundation enabling continued studies to be carried out at second-cycle level within informatics, and will also be of such an applied nature that students are employable immediately after completing the programme.

Aims

The bachelor's programme aims to create an understanding of – and provide knowledge of – how digital products, services and messages are designed to achieve customer satisfaction and to meet the user's needs. The aim of the programme is also to clearly integrate current research within applicable areas of the field of informatics and specific knowledge in relation to design processes, working models and concept development methods. The objective is that, on graduation, students should have both an overall perspective and the skills needed in order to be able to work within the digital media industry.

Working areas after graduation

There are many different professional roles within the main area of informatics, and the programme provides the basic knowledge needed to work as a graphic designer, user experience designer, an information architect, a web designer, a front-end programmer or an application developer, or with digital media production, etc. The main prospective employers are communication agencies, information and marketing departments at small and medium-sized companies, IT departments, game development companies and design companies, as well as the daily press and magazines.

Studies after graduation

The programme provides a basis for continued studies at second-cycle level. The School of Engineering at Jönköping University offers the following continuation course for this programme: User Experience Design and IT Architecture (120 credits).

The School of Engineering at Jönköping University's education concept

All programmes at the School of Engineering at Jönköping University (JTH) follow an education concept. The education concept can be seen as consisting of a number of elements that must be included in the study programmes in order to promote the quality and attractiveness of the education in a way that makes students professionally skilled and sought-after. The most recent update, Concept 2017, highlights the connection with industry and internationalisation in particular as two important elements in order to create successful programmes for which there will be a high number of applicants.

For engineering and bachelor's programmes, the mandatory parts of the concept are defined by the learning objectives in the three concept courses. An Industrial Placement Course (IPC) worth 12 credits is also included, which means that the mandatory concept credits are worth a total of 30 credits.

Sustainable development is divided up into social, economic and ecological elements. The social element is included in Leadership and Project Management and the economic element in Entrepreneurship and Business Planning. The ecological element is integrated into its technical context, and the courses in which this is examined are detailed in the programme design matrix.

The connection with industry JTH has a long tradition of close cooperation with industry, through mentor businesses and various educational elements linked to industry. As part of the education concept, an Industrial Placement Course (IPC) has been included in all programmes since 2013, whereby students put their theoretical knowledge into practice. IPC is retained as a mandatory element in Concept 2017, and there are greater opportunities for completing the course abroad.

Internationalisation means that, for example, the opportunity is provided to practise languages and intercultural communication through student exchanges with foreign universities. JTH has around 70 partner universities around the world, and takes part in a number of international student exchange programmes. There is the opportunity to spend part of the study period abroad and to accredit studies abroad towards the degree. As a result of this student exchange, a large number of courses at JTH are taught in English. The New Media Design programme will be open to applicants worldwide, and the point of departure is that all teaching on the programme will take place in English. As part of the internationalisation concept, there is the opportunity to carry out IPC abroad. Internationalisation is also part of the compulsory concept through learning objectives in relation to intercultural communication being included in the Leadership and Project Management course.

Objectives

After completing the programme, students should meet the learning objectives stated in the Swedish Higher Education Ordinance in relation to bachelor's degrees and the programme-specific learning objectives formulated by JTH:

Knowledge and understanding

1. demonstrate knowledge and understanding in the main field of study, including knowledge of the scientific basis of the field, knowledge of suitable methods within the field, in-depth

knowledge of part of the field and an overview of current research issues

Skills and abilities

2. demonstrate an ability to seek, gather, evaluate and critically interpret information that is relevant to a problem and to critically discuss phenomena, issues and situations
3. demonstrate an ability to independently identify, formulate and solve problems and to perform tasks within given timeframes
4. demonstrate an ability to account for and discuss information, problems and solutions in dialogue with different groups, both orally and in writing
5. demonstrate the skills required to work independently within the field to which the programme relates

Judgement and approach

6. demonstrate an ability to make assessments with reference to relevant scientific, social and ethical aspects, within the main area of the programme
7. demonstrate an insight into the role of knowledge within society and into people's responsibility for how knowledge is used
8. demonstrate an ability to identify their need for further knowledge and to develop their expertise

Programme-specific learning outcomes

After completing the programme, students should be able to:

Knowledge and understanding

9. demonstrate knowledge within the field of digital design and media design, including social media and new media platforms
10. demonstrate knowledge of different information-based applications and standards with regard to user-friendliness and to usability and functionality
11. demonstrate knowledge of the basics of marketing communication and an understanding of the importance of this in creating market-adapted products and services
12. demonstrate knowledge of business (economics, entrepreneurship, business planning and marketing) in relevant operations within the chosen area of technology

Skills and abilities

13. demonstrate an ability to produce structured, visual expressions for both new and traditional media
14. demonstrate an ability to realise digital products and services with a focus on structure, user-friendliness, interaction and messages
15. demonstrate an ability to apply acquired knowledge in practical work and demonstrate an insight into their future professional role

Judgement and approach

16. be able to analyse and reflect on the significance of the effects of graphical expression, visual identity and brand development
17. be familiar with the user's role and needs in information-based systems with regard to functionality, usability and user-friendliness
18. demonstrate an ability to create channels and communicate a message, and apply a target-oriented design process based on market and target group analyses
19. demonstrate an ability to take an interdisciplinary approach and to apply a systems perspective

Contents

Programme principles

The programme is worth 180 credits, and focuses on preparing students for further studies at a

higher level, and on preparing them for working life. The programme's content revolves around the areas of digital information systems, communication and user experience. The programme's basic philosophy is to combine these areas so that students gain an overall perspective and are ready to encounter an ever-changing world within this subject.

Informatics is a broad area, and the programme is located within this main area. Here, and in this context, we take informatics to mean the following:
Informatics encompasses interdisciplinary studies of the design, application, use and benefits of information technology.

The programme is structured in accordance with the principle of basic knowledge first, and the first year consists of fundamental theories and basic skills. This involves visual communication, web technology, user interfaces and marketing communication. During year two, this knowledge is integrated and deepened through project courses and theory courses in subjects such as information architecture and interaction design. The third year consists of a relatively free semester in which students have a great deal of choice, to facilitate studies abroad or to take supplementary courses required in order to study a specific master's programme. The programme concludes during the spring semester of the third year with a degree project and an eight-week Industrial Placement Course (work experience). The IPC can also be arranged as part of studies abroad during the autumn semester of year three. In this case, it will be replaced during the final semester by elective courses worth 12 credits within the subject area of informatics.

Within the courses, there is a great emphasis on both lectures and students' own work developing their analytical ability and holistic systems approach. The teaching consists of lectures, seminars, laboratory work and project work. Exercises and laboratory work are designed to correspond clearly to real cases and scenarios. During the teaching, there will also be several pieces of project work linked directly to industry.

Compulsory coursework assignments throughout the period of studies will be added to students' portfolios. These portfolios will be compiled during year 3 in order to further equip students for applying for work. Scientific working methods provide an analytical and reflective approach in the practical applications and the project work with a particular focus on the main area of informatics. In the programme's advanced courses, students should be able to independently identify and resolve problems and carry out project tasks within set frameworks. The technology courses are carried out based on a sustainability perspective, taking economic, social and environmental responsibility.

Progression

The structure of the programme focuses on – and is directed towards – giving students interdisciplinary knowledge within the main area of informatics.

Year 1 includes courses that provide basic knowledge and principles within graphics/visual design and technology, and knowledge about digital information systems. Theoretical studies in marketing, marketing communication, economics and entrepreneurship are also included. After the first year, students should have sufficient theoretical knowledge to be able to create simple productions within the relevant sub-area.

During year 2, more in-depth knowledge is provided within the above, and the programme should also give an understanding of how information, communication and technology create

benefits together for society and the individual. The concept of user experience design is introduced during year 1, and more in-depth knowledge within interaction design is provided during year 2. Here, knowledge is provided – and application projects are carried out – in connection with how to create different types of digital solutions and services with visual and graphical expressions, and that provide a consistent user experience on different platforms. One example could be improving or adapting a user interface for a smartphone that goes with another digital product or service.

Students' method knowledge is gradually deepened in terms of both design principles and digital solutions, and during year 3 concept thinking is expanded. Theoretical knowledge is interwoven into projects, in which students must take into account ethical values, cognition, benefits, design principles and economic conditions. In this way, they gain an overall perspective of how digital solutions and users interact, including both opportunities and limitations. Target group and competitor analyses, user tests, personas for choice of method and channel, etc. are carried out for the planning and implementation of the project. Current research within the subject area is introduced during year 1, and is then kept relevant and deepened throughout the programme so that students feel comfortable discussing relevant research issues.

The programme includes courses to provide greater breadth within project management, leadership and organisation. At the end of the programme, during the Industrial Placement Course, students apply and consolidate their theoretical knowledge in practice at a company, an organisation or similar during an extended period, ensuring that they are well prepared for their forthcoming professional lives. Through the degree project and the Industrial Placement Course, students gain an insight into their need for skills development and their need for additional knowledge within the field. Sustainable development is one of JTH's fundamental concepts, and is a recurring theme throughout the programme and the three concept courses.
For those students who intend to study the User Experience Design and IT Architecture (120 credits) master's programme in informatics at JTH, an adapted preparatory course package is offered. During year 3, students also have the opportunity to carry out studies abroad with relevant course content.

Courses

Mandatory courses

Course Name	Credits	Main field of study	Specialised in	Course Code
Business Planning and Entrepreneurship	6	Industrial Engineering and Management	G1N	TBPG17
User Research	6	Informatics	G1N	TABG16
Final Project Work in Informatics	15	Informatics	G2E	TWIP17
Research Methods in Computer Science and Informatics	7.5	Computer Engineering	G2F	TFIN18
Graphic Design for New Media	15	Informatics	G1F	TGNK18
Graphic Design and Visual Communication I	15	Informatics	G1N	TG1G16
Information Architecture	7.5	Informatics	G1F	TAUK17
Interaction Design	7.5	Informatics	G1F	TINK18
Client-side Programming	15	Informatics	G1F	TKPK17
Marketing Communication	9		G1F	TMKG17
Industrial Placement Course in IT Infrastructure and Network Design	15	Informatics	G2F	TNNN19

Project Management and Methods	7.5		G1N	TPJG17
Applied Web Architecture	15	Informatics	G1F	TAWK17
Web and User Interface Design	9	Informatics	G1N	TWBG16

Elective credits
The programme comprises 30 credits elective courses during the study-abroad semester (fifth semester). The student can elect courses within Computer Engineering, Computer Science, Graphic Design, Informatics, UX-design or related areas. Up to 7.5 credits, out of the 30 credits, might be elected for courses in line with the School of Engineering's education concept (i.e. courses in foreign language, economics or project management). Students that choose not to go abroad during the fifth semester are recommended to take the courses scheduled in the programme.
For students that do not go abroad during the fifth semester the following courses are (preliminary) scheduled: Motion Graphics 7,5 credits, Client-server Communication 7,5 credits, Digital Marketing and Social Media 7,5 credits and Custom Project Management 7,5 credits.

Programme overview
Year 1

Semester 1		Semester 2	
Period 1	Period 2	Period 3	Period 4
User Research, 6 credits	Web and User Interface Design, 9 credits	Marketing Communication, 9 credits	Business Planning and Entrepreneurship, 6 credits
Graphic Design and Visual Communication I, 15 credits		Client-side Programming, 15 credits	

Year 2

Semester 3		Semester 4	
Period 1	Period 2	Period 3	Period 4
Project Management and Methods, 7.5 credits	Information Architecture, 7.5 credits	Research Methods in Computer Science and Informatics, 7.5 credits	Interaction Design, 7.5 credits
Applied Web Architecture, 15 credits		Graphic Design for New Media, 15 credits	

Year 3

Semester 5		Semester 6	
Period 1	Period 2	Period 3	Period 4
Optional credits, 30,00 credits		Final Project Work in Informatics, 15 credits	Industrial Placement Course in IT Infrastructure and Network Design, 15 credits

Teaching and examination
Two courses are normally studied in parallel during the academic year. An examination will be arranged for each course or subsidiary course. Examination formats and grading are detailed in the relevant course syllabus. The programme overview shows the principle structure of the programme for all years, and may be changed if necessary during the course of the programme. For an updated programme overview, see http://www.ju.se.

Prerequisites
General entry requirements and English 6 or English B, Matematics 2a or 2b or 2c or Matematics B with required grade passed or international equivalent.

Continuation Requirements
Progression to year 2 requires at least 30 credits from year 1 of the programme to be passed. Progression to year 3 requires at least 90 credits from years 1 and 2 of the programme to be passed.

Qualification Requirements

To obtain a Degree of Bachelor with a major in Informatics, specialisation in New Media Design, students must complete a minimum of 180 credits in accordance with the current programme syllabus, at least 90 credits of which must be in the main field of Informatics.
A Degree of Bachelor can be awarded after the student has completed the courses required to gain 180 credits, of which 90 credits are for progressively specialised study in the principal field (main field of study) of the programme, and an independent project (degree project) for at least 15 credits. The courses must be chosen so that the learning outcomes according to The Higher Education Ordinance are fulfilled.

Quality Development

Management councils , Head of Programmes, teachers and students work together with the development of the programmes and courses. All students get the opportunity to do a course evaluation after each completed course and before graduation time. The results of the evaluation are presented to the Head of Programmes, Head of Departments, Course Coordinators and to the Director of Education for further development.
Head of Departments, or corresponding, and Head of Programmes raise questions regarding the programme development within the Council of Programmes.
Representatives of students, training manager and counselor gather continuously to discuss the recently completed programme courses.
The chairman of students Educational Committee is a regular member in Council of Education.

Other Information

Information regarding entrance requirements

If applicants lack the formal entrance requirements, their actual expertise can be assessed if they believe that they have gained equivalent knowledge in some other way. The aim is to assess overall expertise and whether applicants are able to cope with the chosen programme. Actual expertise may involve knowledge and experience from working life, an extended period abroad or other course activities.
Courses included in the programme can be studied as independent courses, space permitting. The relevant entrance requirements are detailed in the course syllabus. Admission is in accordance with the admission regulations for education at first- and second-cycle levels at Jönköping University.
This programme syllabus is based on “Regulations and guidelines for first-, second- and third-cycle education at Jönköping University”.