CURRICULUM
Bachelor of Business Administration, Degree Programme in Business Information Technology

The Degree Programme in Business Information Technology offers you an updated and wide base for work in the ICT field as well as its development. The studies take place in a modern learning environment and are linked to workplace assignments. Degree Programme students network with businesses and experts in the field.

Parts of the studies are carried out in the University of Eastern Finland, Karelia University of Applied Sciences, and Savonia University of Applied Sciences' ICT studies path. These 60-80 credit basic studies are common for all ICT study path students. This cooperation streamlines the studies and additionally offers different methods and options regarding complementary studies. The cooperation enables computer science bachelor degree holders to smoothly transition to master's level studies at the University of Eastern Finland.

Degree

Degree title   Bachelor of Business Administration
Extent   210 cr / 3.5 yrs

Typical tasks for graduates

As a Bachelor of Business Administration from the Business IT Degree Programme you have the competence to work on software engineering and as an expert in developing information systems. During the studies you work on e.g. application and game development, information management and information systems expertise, or artificial intelligence and robotics expertise tasks. You will have diverse project management skills. Additionally, you can develop competences as an entrepreneur, if so desired. The development of technology constantly creates opportunities for the development of new business applications, integration and automation. Examples of this from recent years include gamification, software robotics, Big Data and data analysis, the Internet of Things, artificial intelligence and machine learning, as well as various virtual and augmented reality technologies (AR/VR), whose development demands diverse professional competences. At work today, e.g. in business, industry, health and welfare services as well as travel and free time services, there is a need for growing, developing, and enabling versatile ICT solutions. Computer Sciences works in these fields to develop and in particular to link expertise.

Implementation of studies

The studies are implemented using multimodal online-learning. The studies familiarise you with developmental work and telework common today. Online studies develop your skills to work in modern, decentralized and virtual expert organisations. The studies allow flexibility regarding the time and place of study (e.g. the recordings of the lectures, development environments are available also from outside of school). Your working environments are modern, and various development platforms and technologies are utilized in the courses.

The project studies in particular engage you with authentic development tasks. During your studies you work in different projects both within your degree programme and with local companies. In projects you will not only develop your professional competences but also your interaction and team work skills.

Structure and Content of Studies

Your degree programme contains common core and complementary studies enhancing your key and specialised competences. In the Degree Programme in Business IT the extent of common core studies is 180 cr and complementary studies 30 cr. The common core studies contain 35 cr of project studies, 30 cr of practical training (i.e. work placement), 15 cr for the thesis, and 10 credits for complimentary studies. The thesis process is divided into three five-credit courses. Each course can be completed at different stages of studies. However, the thesis plan needs to be accepted before the implementation phase. The flexibility of the core competence allows for studying the complementary knowledge of different options or the completion of what is needed to move on to master's studies.

Projects are a significant part of your studies. With the help of projects teaching can be flexibly adjusted to the new demands and challenges of the fast developing ICT-field. Project studies contribute to deepening your knowledge in game and application development or digital business and service development projects. A project organisation comprises students acting in different roles. Teachers ensure by customised teaching that the project members have sufficient skills and knowledge before starting a project. Projects are large entities in which proceeding takes place in stages and are managed with agile methods and add to your credit points. Projects are evaluated according to unified criteria to ensure balanced grading in order to support your professional development.

The complementary studies mostly contain modules of 15 credits. During complementary studies you can deepen your knowledge in the following units that will take place in the 2nd-4th year of your studies:

- Game development and software architectures
- Advanced game and Software Development Technologies
- Digital Business
- Digital Services Management
- Basic Studies of Computer Science

Additionally, you can take complementary courses from the common Karelia UAS selection:

- IoT in Industry and Business – A Practical Approach
- Management and Leadership
- Business Competence and Entrepreneurship
- Customer-Oriented Marketing
- Financial Administration and Taxation in Practice
- Geoinformatics
- Expertise pertaining to Russia
- Developing Competence in Ageing
- Innovation and Productisation
- International Studies 1
- International Studies 2
- Optional language studies (Spanish, Chinese, French German, Russian)
- Refresher courses in languages and mathematics (3-9 cr)
- Training programme of Joensuu Sports Academy (3–15 cr)
- Participation in peer tutoring and student union activities (3–15 cr)

The complementary studies take place in the autumn and spring terms of the second study year, in the spring term of the third study year and the autumn term of the fourth study year. You can take some complementary study modules also as summer courses. The Sports Academy Training, Student Union and Tutor Activities as well as the optional language studies can spread over several semesters. If the studies mentioned above do not match with your professional objectives, you can discuss other alternatives with your teacher tutor or counsellor.

BUSINESS INFORMATION TECHNOLOGY

Bachelor of Business Administration | 210 cr / 3,5 years

Karelia

Information Systems Competence | ICT-infrastructure Competence | ICT-development Competence | Business Competence | Ethical Competence | Internationalisation Competence | Learning Skills | Innovation Competence | Work Community Competence

4th year — ICT PROJECT DEVELOPER

Thesis	15 cr
Career Planning and Development 4	1 cr
Complementary Studies**	15 cr

3rd year — ICT PROJECT LEADER

Practical Training (Work Placement)	30 cr	A Commissioned ICT Project	10 cr
		Corporate Communication	2 cr
		Research and Development Competence	3 cr
		Professional English	3 cr
		Alternative Core Competence Studies	10 cr
		Career Planning and Development 3	1 cr

2st year — ICT PROJECT EXPERT

Agile Development Project*	10 cr	Essential ICT English	3 cr
ICT User Support and Education	2 cr	Svenska för IT-branschen	3 cr
Sociala kontakter	3 cr	Career Planning and Development 2	1 cr
Complementary Studies**	15 cr	Expert Communication	2 cr
		Artificial Intelligence and Robotics	7 cr
		Software Engineering II*	10 cr
		Introduction to Information Security*	5 cr

1st year — ICT PROJECT PARTICIPANT

Reporting and Written Communication	2 cr	Testing Methods	2 cr
Logic	3 cr	English Communication Skills	3 cr
Computer Systems*	5 cr	Human and Interactive Technology*	5 cr
Career Planning and Development 1	2 cr	User Interface Programming*	5 cr
Development Environments	3 cr	Software Engineering I*	5 cr
Basics of Programming*	5 cr	ICT Business and Entrepreneurship	5 cr
Object-Oriented Programming*	5 cr	SQL and Database Management Systems*	5 cr
Introduction to Information Technology*	5 cr		

* Included in the UEF/ISAT ICT study path, bachelor level studies in computer science

** Business Information Technology -related options: game development, digital business, ICT education path

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Competence Requirements

Competence Area	Description of the competence Bachelor of Business Administration (UAS)
Information Systems Competence	- understands information systems as a whole and their customer-oriented production, procurement and implementation as well as the principles of data management from the development perspective - is able to define, design, program and test usable software, database services and interface taking into account data security - is able to document and interpret documents, for example, in maintaining applications - is able to plan and implement a training
ICT-infrastructure competence	- is able to select the application services and development environments required in a project - is able to take information security issues into account when making decisions concerning ICT infrastructure
ICT-development competence	- understands the nature of ICT development and the entity of development work in an organisation - is able to work in distributed development and production environments - is able to design and change his/her work environment between local and distributed development and production environments according to the needs of the development work - understands the increased role of sharing knowledge in remote work projects - understands the meaning of goal-oriented and responsible actions for the success of a project - is able to utilise appropriate tools supporting distributed and local development environments - is able to recognize and manage risks in ICT development work - is able to apply his/her knowledge and skills in an ICT field and to analyse, evaluate and develop operations in this field
Business Competence	- understands the central processes and functions of a business - understands the role of ICT in an organisation and its role in developing business operations - is able to develop business processes and look for support for solutions in Information Technology - understands the significance of agreements, offers, licences and intellectual property rights in his/her work
Ethical Competence	- is able to assume responsibility for one's own actions and their consequences - is able to work according to the code of professional ethics of one's field - is able to take different parties into account - is able to apply the principles of equality - is able to apply the principles of sustainable development

Innovation Competence	- is able to solve problems and develop working methods innovatively - is able to work in projects - is able to carry out research and development projects and to apply existing knowledge and methods of one's field - is able to find customer-oriented, sustainable and profitable solutions
Inter-nationalisation Competence	- has the language competence necessary for the work in the field and its development - is able to cooperate with people from different cultural backgrounds - is able to take into account the opportunities and effects of internationali-sation at work
Learning Skills	- is able to assess and develop one's competences and learning methods - is able to retrieve/ search, process and analyse information critically - can assume responsibility for team learning and knowledge
Work Community Competence	- is able to function as a member of a work community and contribute to its work well-being - is able to function in various communication and interaction situations at work - is able to use information and communication technology in the tasks of one's field - is able to create business contacts and to work in professional networks - is able to make decisions in new and unforeseeable situations - is able to supervise others as well as to work independently in expert tasks - has entrepreneurial abilities