

20.03.2016

Curriculum at Lahti University of Applied Sciences 2016-2017

Degree Programme in Business Information Technology 16S

Degree-specific description

Intended learning outcomes and competences

The Degree Programme in Business Information Technology is aimed at preparing students for future expert roles in workplace settings which involve the use of digital services for business support and development. The programme is designed to equip students with skills and knowledge in IT systems, ICT infrastructure, ICT projects and business competencies, and specialised skills in the student's chosen area of ICT specialisation. On successful completion of the programme, graduates are able to analyse the needs and opportunities of a business and develop ICT solutions taking into account environmental aspects. Practical competencies include ICT support for end users, building new applications, the description of service processes, agile delivery of projects, the construction of user-centred online stores, designing ICT solutions which produce added value for the business, the appraisal of the suitability of off-the-shelf ICT solutions for different tasks, and the management of their deployment.

Programme structure

The Degree Programme in Business Information Technology comprises core competences and complementary competences. Core competence includes studies which ensure professional expertise in the chosen field. Complementary studies allow students to further define their professional profile based on their personal interests. During the programme, students produce different types of systems solutions which are mainly related to welfare services. In systems development, special attention is paid to their environmental impacts and good user experience.

In the first stage of the programme, the focus is on core competences. During the first year of study, students familiarise themselves with the basics of business administration and the utilisation of related applications. In addition, they learn common technologies used in ICT, such as web production, programming and databases.

In the second year of study, students develop advanced expertise required in ICT systems building and specialised expertise required in service business. In addition, students can start to develop in-depth expertise in areas such as the use of ICT in business or the development of web applications using agile and other methodologies.

In the third year of study, students focus their learning on their personal areas of interest. Expertise is developed through work placements and various practice-oriented studies in areas such as the design, acquisition and deployment of IT systems. In addition, students familiarise themselves with workplace development methods and entrepreneurship.

In the final autumn term, students take in-depth study in subjects such as eBusiness solutions or the role of ICT in the welfare sector and complete a thesis project designed to respond to real-life workplace requirements.

Programme delivery

During the programme, students apply theoretical knowledge in practice in various ways. Self-initiative, collaboration, innovativeness, creativity, multicultural skills and the ability to present

solutions to other people are given emphasis.

There are different modes of course delivery. Students learn independently by working in groups of different sizes both in contact sessions and in virtual communities. During the programme, students participate in projects implemented in cooperation with local workplace organisations and in different types of development projects. The programme includes a work placement period which carries 30 ECTS credits and allows students to build their expertise by working in real-life workplace settings.

The programme is comprised of broad modules which include ICT studies as well as core competencies of other fields, such as interaction skills, languages, business management, welfare services, service expertise, etc. The business information technology courses are delivered jointly in the Monitori learning community by students and staff of the Business Information Technology Programme and the Faculty of Technology Degree Programme in Information and Communication Technology. The community maintains active network contacts with the labour market and international partners by training practice-oriented and innovative ICT professionals.

Code	Name	1 y	2 y	3 y	4 y	ECTS total
LIIT16-1000	CORE STUDIES					150
LIIT16-1001	Basic studies					105
LIIT16-1002	Communication and Languages					15
LI00AX31	English Language and Communication	3				3
LI00AX49	Professional Communication (Finnish)	3				3
LI00AX50	Information Literacy	1				1
LI00AX32	Swedish: Written Communication	1,5				1,5
LI00AX33	Swedish: Oral Communication	1,5				1,5
04LI010	Organisational communication and cultural competence	5				5
LIIT16-1003	ICT COMPETENCE					45
LIIT16-1004	Web Production					15
47IOKK003	Image Processing	3				3
47IOPP004	Project Work Essentials	4				4
47IOVP003	Network Services	3				3
47IOWJ003	Web Publishing	3				3
47IOWT005	Web Technologies	5				5
LIIT16-1005	ICT systems					15
47IOJP004	Green ICT Systems Project	4				4
47IOKL003	Operating Systems and Hardware	3				3
47IOOP004	Introduction to Programming	4				4
47IOTT004	Computer Networks and Security	4				4
LIIT16-1006	Applications					15
47IOMTS04	Modular solutions		4			4
47IOSP004	Green ICT Applications Project		4			4
47IOTV004	Data Storages		4			4
47KICE003	ICT English		3			3

47YOJV004	Object Oriented Programming		4			4
LIIT16-1007	Entrepreneurship and Business Environment					45
LIIT16-1008	Understanding Business					15
04YLYLH03	Company's Business and Personnel	3				3
04YLLOG03	Logistics	3				3
04YLTH003	Financial Management	3				3
04YLMM003	Marketing and Sales	3				3
04YLAN003	Customer Communication and Negotiation Skills	3				3
LIIT16-1009	Digitalisation in Service Business					15
04YLPL005	Service Business		5			5
04YLDPO05	Digital Technology Services		5			5
04YLDPS05	Digital Service Design		5			5
LIIT16-1010	Entrepreneurship and Development					15
04YLIAT05	Research Methods for ICT Professionals			5		5
04YLTKM05	ICT Professional's Research Methods		5			5
04YLYT005	Entrepreneurship			5		5
LIIT16-1011	THESIS					15
LIIT16-1012	PRACTICAL TRAINING					30
LIIT16-1013	COMPLEMENTARY COMPETENCE					60
LIIT16-1014	Professional Studies					45
LIIT16-1015	ICT in business and training skills					15
47AOKT005	Training skills		5			5
47AOTST05	Enhanced use of office applications		5			5
47AOWSS05	Website design and a content management system		5			5
LIIT16-1016	IT Project					15
47AOPCR05	Project Communication and Reporting		5			5
47AOPIP05	Practices in IT Project		5			5
47AORLP05	Real Life IT Project		5			5
LIIT16-1017	ICT in the well-being sector					15
47AOJSP05	Service processes in the public sector			5		5
47AOTPO05	Health care service systems			5		5
47AOHM005	The possibilities of well-being technologies			5		5
LIIT16-1018	Agile Web Application Development					15
47AOADM05	Agile Software Development Methods			5		5
47AOADP05	Agile Web Application Development Project			5		5
47AOWAD05	Web Application Development			5		5
LIIT16-1019	Information Systems Design and Management					15
47AOCMIS5	Communication Models in ICT Services		5			5
47AOMAIS5	Management and Acquisition of Information Systems		5			5
47AOSAD05	Information Systems Analysis and Design		5			5

LIIT16-1020	eBusiness Solutions					15
47AOEB005	eBusiness			5		5
47AOEC005	eCommerce			5		5
47AOPEBD5	Practical eBusiness Development			5		5
LIIT16-1021	Elective Studies					15

LIIT16-1000 CORE STUDIES: 150 ECTS

LIIT16-1001 Basic studies: 105 ECTS

Learning outcomes of the study module

The common basic studies form a basis on which all professional and optional studies are constructed. They aim at offering the students a common ground in their studies and prepare them for the working life.

The common basic studies orientate the students towards other studies which concentrate on specialised professional skills. Common basic studies consist of courses which are compulsory to all students.

LIIT16-1002 Communication and Languages: 15 ECTS

Learning outcomes of the study module

The student

- is able to interact appropriately and skilfully in professional communicative situations
- can observe and explain the role of successful communication from the perspective of an organization
- can interact in communicative situations according to the recipient, the situation and the requirements of the industry
- can develop their written and oral communication skills in diverse ways

Courses included in the study module

LI00AX31 English language 3 ECTS

LI00AX32 Swedish language, written skills 1,5 ECTS

LI00AX33 Swedish language, oral skills 1,5 ECTS

LI00AX34 Professional communication (Finnish students) 4 ECTS

04LI010 Organisational communication and cultural competence 5 ECTS

LI00AX31 English Language and Communication: 3 ECTS

Learning outcomes

The student

- understands the basics of business including the terminology and concepts
- can manage in written and oral communication situations needed in professional studies and at work
- masters the main grammatical structures in the context of everyday business functions

The course is on level B2 of the Common European Framework of Reference

LI00AX49 Professional Communication (Finnish): 3 ECTS

Learning outcomes

The student

- can assess and interpret the meaning in different kinds of messages and develop their own communication skills
- can apply their oral and written communication skills appropriately and in dialogue context in work-life customer contacts
- can apply their group work skills in meeting and negotiation situations
- can plan and produce grammatically correct customer texts and scientific articles

LI00AX50 Information Literacy: 1 ECTS

Learning outcomes

Student is able to

- determine the extent of information needed and understand the importance of information seeking as part of his/her studies
- evaluate information and its sources critically
- use information ethically and legally
- access the needed information effectively and efficiently
- use different information sources and services effectively

LI00AX32 Swedish: Written Communication: 1.5 ECTS

Learning outcomes

Students will be able to

- express and explain their views and ideas
- use basic field-specific vocabulary
- give basic information about their education, work experience and work duties, for example in a job interview situation
- write a job application
- source Swedish-language industry information from the internet and other resources- use online dictionaries

LI00AX33 Swedish: Oral Communication: 1.5 ECTS

Learning outcomes

Students will be able to

- express and explain their views and ideas
- use basic field-specific vocabulary
- give basic information about their education, work experience and work duties, for example in a job interview situation
- write a job application
- source Swedish-language industry information from the internet and other resources- use online dictionaries

04LII010 Organisational communication and cultural competence: 5 ECTS**Learning outcomes**

The student

- understands the meaning of communication from the perspective of a company's financial result and cooperation
- understands the impact of communication on job satisfaction and reputation management
- understands the connection between communication and corporate structure
- understands the meaning of cultural differences in communication
- can implement internal and external communication in a company
- can choose appropriate means and channels for communication
- knows how to contribute to a company's image through texts

LIIT16-1003 ICT COMPETENCE: 45 ECTS**Learning outcomes of the study module**

Students will be able to work as a team member in projects. Students will be able to plan, and design pages and sites to web. They can edit and implement content to web. They know servers and browsers meaning and role when building a website, and when developing and coding the website.

LIIT16-1004 Web Production: 15 ECTS**Learning outcomes of the study module**

Students will be able to create and publish a website as a member of a project team, demonstrate a good command of basic skills in image editing, document and present a project, and demonstrate basic command of project work.

47IOKK003 Image Processing: 3 ECTS**Learning outcomes**

Students are able to

- use terms and concepts related to image editing
- understand the basic stages of image editing
- assess the limitations and possibilities of digital images
- describe the differences and uses of numeral systems
- do conversions between numeral systems
- use image editing software to create collages and web images.

47IOPP004 Project Work Essentials: 4 ECTS**Learning outcomes**

Students are able to

- document the various stages of a project using word processing, spreadsheet and presentation software
- work in groups and create a solution to meet the specifications of a project

- work individually and as members of a project team to create a solution for a particular project
- retrieve and apply relevant information for a particular project
- evaluate the use of ICT from an ecological perspective

47IOVP003 Network Services: 3 ECTS

Learning outcomes

Students are able to

- explain what virtualisation and cloud services are
- describe different types of cloud services and their uses
- choose an appropriate cloud service according to the intended use
- deploy a virtual machine, configure network settings and verify their operation
- create a new virtual machine, install an operating system (Linux / Windows) and configure the basic settings
- install web server software and deploy a content management system (CMS) application
- publish material in web systems.

47IOWJ003 Web Publishing: 3 ECTS

Learning outcomes

The student

- can describe functions of a web server
- can install a virtual machine, set up network settings and check that settings work correctly
- can install web server software
- can install and configure a content management system (CMS)
- can make a web site with CMS
- can modify and create themes for a web site
- can install new modules and create own modules.

47IOWT005 Web Technologies: 5 ECTS

Learning outcomes

Students are able to

- use the web-based services of Lahti UAS
- describe the basic operation of the Internet and the most common protocols
- design and implement a website using the HTML markup language and CSS style specifications
- take into account the principles of accessibility and usability in website execution
- create a website from a layout design
- use basic programming structures when creating a website
- use basic scripts on websites.

LIIT16-1005 ICT systems: 15 ECTS

Learning outcomes of the study module

Students will be able to design and implement a secure ICT system according to the specifications of a particular project.

47IOJP004 Green ICT Systems Project: 4 ECTS

Learning outcomes

Students are able to

- explain basic concepts related to intellectual property rights
- solve problems in a systematic manner to meet the objectives of a project
- plan and implement an ICT project as part of a project team
- present and justify the solutions of a project team in a project document review
- use tools efficiently.

47IOKL003 Operating Systems and Hardware: 3 ECTS

Learning outcomes

Students are able to

- compare different operating systems
- describe the role and technical functionality of the active directory
- install an operating system in a virtual environment and configure the basic settings
- monitor and determine the status and overall load of server processes
- implement a domain and use it to manage users and workstations.

47IOOP004 Introduction to Programming: 4 ECTS

Learning outcomes

Students are able to

- use logical operators in programming
- describe software development stages and the principles of execution
- design and implement a modular interactive application
- use software development tools
- name variables and functions in a descriptive manner
- follow good programming practices.

47IOTT004 Computer Networks and Security: 4 ECTS

Learning outcomes

Students are able to

- plan and implement a secure local area network for a small office
- describe the basic structure and operation of the Internet
- describe the principles of IP addressing and subnetting
- apply the basics of Boolean algebra in subnetting and use 1's and 2's complements
- use the most common local area network technologies in planning and implementation
- implement a secure home network (SOHO) and connect it to an operator's network
- explain the principles of encryption
- do network troubleshooting
- operate according to the principles of packet and content filtering.

LIIT16-1006 Applications: 15 ECTS

Learning outcomes of the study module

Students will be able to implement an object-oriented service using data storage for a real-life customer. In addition, students will be able to use professional English in practice.

47IOMTS04 Modular solutions: 4 ECTS**Learning outcomes**

- is able to understand the structure of the modular application
- is able to design and implement modular software
- is able to develop modular software
- is able to compare different solutions

47IOSP004 Green ICT Applications Project: 4 ECTS**Learning outcomes**

The student is able to

- retrieve information and apply it in the execution of an application project
- analyse a customer's problems and create a project plan based on the analysis
- design and execute software which utilises data storages and meets the project specifications
- utilise the properties of a software development environment in project implementation
- work both independently and as an active member of a team towards predetermined project objectives
- understand the tasks of a project manager and a project steering group

47IOTV004 Data Storages: 4 ECTS**Learning outcomes**

Students are able to

- execute database queries and data updates using the SQL language
- understand the basic principles of normalization and operate accordingly
- maintain databases
- explain the basic principles of transactions
- explain the importance of data security in data management
- describe XML, object-relational and NoSQL database types.

47KICE003 ICT English: 3 ECTS**Learning outcomes**

The students can

- use the terminology of their field and understand professional texts
- discuss topics related with their field
- communicate in job application situations
- present their own project orally and in writing
- write a professional report and a thesis abstract.

47YOJV004 Object Oriented Programming: 4 ECTS

Learning outcomes

Student

- is able to understand basics of object oriented programming
- is able to design and implement object oriented applications
- is able to operate effectively in a modern environment of program development
- is able to organize maintainable application structure

LIIT16-1007 Entrepreneurship and Business Environment: 45 ECTS

Learning outcomes of the study module

Is able to understand basics of business environment

LIIT16-1008 Understanding Business: 15 ECTS

Learning outcomes of the study module

Student can

- explain the business operations of a company as a whole
- describe the various areas of a company's business and cite examples of their tasks model the main processes of a company
- evaluate the effect of environmental issues in business
- evaluate a company's business from a development perspective
- work in a multicultural project team

04YLYLH03 Company's Business and Personnel: 3 ECTS

Learning outcomes

Students will be able to

- describe different areas of business operations as well as the supporting systems
- describe the purpose of a company's mission, vision and values
- describe business processes
- examine a company from the point of view of human resources and HR management

04YLLOG03 Logistics: 3 ECTS

Learning outcomes

Students will be able to

- describe the logistics element of business
- plan for profitability from the point of view of logistics
- name the primary functions of logistics
- apply methods of operational development and monitoring
- describe the principles of enterprise resource planning (ERP) systems

04YLTH003 Financial Management: 3 ECTS

Learning outcomes

Students will be able to

- describe the role of financial management in business
- derive information from accounting records
- derive information from financial statements and explain how cash flow is created
- assess a company's financial standing based on annual accounts

04YLMM003 Marketing and Sales: 3 ECTS

Learning outcomes

Students will be able to

- adopt a customer-oriented approach
- describe the primary functions of marketing and sales
- analyse sales activity in the IT sector
- design uses of the digital operating environment for marketing purposes

Integrated into the Customer Communication and Negotiation Skills course.

04YLAN003 Customer Communication and Negotiation Skills: 3 ECTS

Learning outcomes

Student

- is able to run business negotiations
- is able to benefit of the marketing communication
- is able to communicate with customers
- is able to communicate in digital environment

LIIT16-1009 Digitalisation in Service Business: 15 ECTS

Learning outcomes of the study module

Students will be able to

- analyse services from the user point-of-view in various service environments
- recognise the specific characteristics of service business
- evaluate and develop various digital service concepts
- examine digitalisation as a change in the operating environment
- manage the challenges and opportunities of digitalisation for value creation

Contents

- the nature of service
- service environments
- usability of digital services
- digitalisation as a driver of change
- specific characteristics of digital services

- challenges and opportunities
- digitalisation in value creation
- digital service design as the basis of coding

04YLPL005 Service Business: 5 ECTS

Learning outcomes

Students will be able to

- examine services as business
- take into account the specific characteristics of service business in their work
- compare different service concepts
- appraise services

Contents

Characteristics, challenges and opportunities of service business

04YLDP005 Digital Technology Services: 5 ECTS

Learning outcomes

Students will be able to

- identify and compare different types of digital services
- evaluate the added value of digital technology in services
- assess the usability of digital services
- evaluate business opportunities of digital services

Contents

- digital services
- digitalisation as a change in the operating environment
- digital technology as added value
- digital services in value creation
- the usability of digital services
- digital services as business
- the integration of digital technology into service concepts

04YLDPS05 Digital Service Design: 5 ECTS

Learning outcomes

Students will be able to

- design digital services with a customer-oriented approach
- specify digital services
- assess the role of digitalisation in business
- evaluate business models of digital services

Contents

Multidisciplinary design

LIIT16-1010 Entrepreneurship and Development: 15 ECTS

Learning outcomes of the study module

Student can

- demonstrate a good command of the basics of entrepreneurship
- evaluate business opportunities and write a business plan
- understand the role of continuous development in business
- take customers and other stakeholders into consideration as success factors for a company's business
- develop a company's business as a whole and develop their own work as part of it

04YLIAT05 Research Methods for ICT Professionals: 5 ECTS**Learning outcomes**

- describe the principles of scientific research and the research process
- apply an investigative and developmental approach and apply current knowledge - apply common research methods of the field, e.g. case-study research, action research and design science
- produce text in accordance with the principles of scientific writing
- report findings in a research report
- evaluate the reliability of scientific information and its relevance to business operations

04YLTKM05 ICT Professional's Research Methods: 5 ECTS**Learning outcomes**

- knows the nature of scientific knowledge and the process of scientific work
- is able to participate in research projects
- is able to evaluate the validity, reliability and generalizability of knowledge
- is able to act with an investigative and innovative working motivation and apply the latest knowledge in his/her work
- knows the style and form of scientific writing and is able to write reports

04YLYT005 Entrepreneurship: 5 ECTS**Learning outcomes**

- explain the basics of entrepreneurship and the Finnish business sector
- evaluate business opportunities
- analyse a business idea and its potential for success write a business plan

LIIT16-1011 THESIS: 15 ECTS**Learning outcomes of the study module**

The purpose of the thesis is to develop and demonstrate capabilities in applying knowledge and skills in the research and development of a workplace-oriented topic related to the chosen field. The thesis project is a process which includes the knowledge and skills base, selection of topic, the planning, implementation, reporting and presentation of the research project, and final assessment. Alternatively, the thesis can be a development plan which does not include actual research, however, the data must be sourced in accordance with the principles of research practice. In this type of project, the knowledge base must be presented separately, unless it is incorporated in the actual work. Students can start the thesis project once they have completed the majority of their specialised professional studies and at least the research process component (5 ECTS credits) of

methodology studies. Detailed instructions on thesis projects are available on the Faculty of Business Studies page in Reppu.

LIIT16-1012 PRACTICAL TRAINING: 30 ECTS

Learning outcomes of the study module

- carry out key tasks related to professional studies in practice
- broaden and deepen professional competencies
- apply knowledge and skills in a workplace environment
- prepare for real-life workplace requirements

LIIT16-1013 COMPLEMENTARY COMPETENCE: 60 ECTS

Learning outcomes of the study module

Complementary competence is comprised of professional studies chosen on the basis of personal career goals and the personal study plan.

LIIT16-1014 Professional Studies: 45 ECTS

Learning outcomes of the study module

- develop a business operation by applying IT
- create solutions according to workplace requirements by using office applications
- design and develop a website with a user-centered approach by using a content management system
- plan, implement and assess a training event

LIIT16-1015 ICT in business and training skills: 15 ECTS

Learning outcomes of the study module

Students will be able to

- develop a business operation by leveraging IT
- produce solutions for workplace requirements by using office applications
- design and develop a website with a user-centred approach, using a content management system
- design, implement and assess a training event

Courses included in the study module

- Training skills 5 ECTS
- Enhanced use of office applications 5 ECTS
- Website design and a content management system 5 ECTS

47AOKT005 Training skills: 5 ECTS

Learning outcomes

Students will be able to

- build an eLearning environment
- design, implement and assess a training event on the use of IT based on a selected teaching method

- communicate in an efficient, clear and customer-oriented manner

47AOTST05 Enhanced use of office applications: 5 ECTS

Learning outcomes

Students will be able to

- use office applications in a versatile manner
- create solutions using office applications for different types of requirements
- build automated functions to enhance the business operation
- evaluate the environmental impacts of IT usage

47AOWSS05 Website design and a content management system: 5 ECTS

Learning outcomes

Students will be able to

- design and execute a website using a content management system
- design a website to support the business operation
- understand and apply usability principles in web and mobile environments
- produce a service based on user experience

LIIT16-1016 IT Project: 15 ECTS

Learning outcomes of the study module

The student is able to

- plan and implement IT project work processes and methods
- create a project plan by utilizing appropriate tools
- apply project management methods in practice manage and monitor an IT project
- recognize the importance of change and quality management

47AOPCR05 Project Communication and Reporting: 5 ECTS

Learning outcomes

- recognize the importance of communication and documentation in IT projects
- identify the different aspects of project communication
- use English and Finnish in international project work
- identify differences between formal and informal English

47AOPIP05 Practices in IT Project: 5 ECTS

Learning outcomes

- plan and implement IT project work processes and methods
- create a project plan by utilizing appropriate tools
- apply project management methods in practice
- manage and monitor an IT project
- recognize the importance of change and quality management

47AORLP05 Real Life IT Project: 5 ECTS

Learning outcomes

- act as a project team member and manager in an IT project
- implement a solution for an IT related problem in a real business environment
- organise the deployment workflow and product roll-out activities

LIIT16-1017 ICT in the well-being sector: 15 ECTS

Learning outcomes of the study module

Students will be able to

- describe service processes of the public sector and evaluate their performance
- describe health care service and information systems and identify their future challenges
- design user-centred services by utilising well-being technologies

Courses included in the study module

47AOJSP05 Service processes in the public sector 5 ECTS credits

47AOTP005 Health care service systems 5 ECTS credits

47AOHM005 The possibilities of well-being technologies 5 ECTS credits

47AOJSP05 Service processes in the public sector: 5 ECTS

Learning outcomes

Students will be able to

- take into consideration legislation governing the public sector
- describe operational processes of the public sector and evaluate their performance and role in the organisation
- identify IT systems which support and facilitate public sector processes
- find solutions to enhance the effectiveness of service processes by using IT systems
- evaluate service processes from the customer's perspective

47AOTP005 Health care service systems: 5 ECTS

Learning outcomes

Students will be able to

- describe the processes of health care service systems
- identify characteristics specific to IT contracts in public health care
- identify operative IT systems of health care and problem areas in them and identify possible solutions
- compare national and local health care IT system architectures and identify standards used in them
- provide reasoning for the importance of privacy and data protection in health care
- identify future challenges of the health care service system

47AOHM005 The possibilities of well-being technologies: 5 ECTS

Learning outcomes

Students will be able to

- design a technology-based service to support a customer's well-being
- describe a well-being service
- evaluate the user experience of a well-being service
- instruct and support customers in the deployment of a technology-based well-being service

LIIT16-1018 Agile Web Application Development: 15 ECTS

Learning outcomes of the study module

The student will

- know the key agile software development methods
- be able to apply agile development processes in a software development project
- understand the essential concepts and technologies related to Web applications
- be able to develop and update Web applications which apply different Web technologies
- be able to report and present the outcomes of a project in a professional manner

47AOADM05 Agile Software Development Methods: 5 ECTS

Learning outcomes

The student will

- understand the basic concepts and methods of agile software development
- know the values, practices and principles of agile development
- be able to apply common agile practices in a team
- be able to apply tools supporting agile development methods
- know agile testing principles
- know the role of the review process as a quality control method

47AOADP05 Agile Web Application Development Project: 5 ECTS

Learning outcomes

The student will

- be able to apply the principles of agile development methods in a software development project
- be able to develop a completely functional Web application
- be able to report and present the outcomes of the project professionally in English
- be able to plan, implement and report the testing of a system

47AOWAD05 Web Application Development: 5 ECTS

Learning outcomes

The student will

- know how different programming languages and system software are applicable to the implementation of Web applications
- understand the key concepts, technical foundations and principles of Web applications
- know the importance of data security and privacy
- be able to design the system and software architecture of a Web application
- be able to design the user interface and server side business logic of a Web application
- be able to implement the graphical user interface of a Web application
- be able to implement the server side business logic of a Web application

- be able to incorporate the application of databases into server side programs
- be able to apply a graphical software development tool in Web application development

LIIT16-1019 Information Systems Design and Management: 15 ECTS

Learning outcomes of the study module

The student will

- understand information technology as a strategic asset
- understand the importance of communication in systems design
- be able to work in an international team
- be able to analyze systems requirements and design an information system based on the requirements
- be able to design a systems acquisition process and evaluate investment costs

47AOCMIS5 Communication Models in ICT Services: 5 ECTS

Learning outcomes

- understand the basic principles of service-oriented information systems management process models and frameworks
- be able to act and communicate in an environment implementing the customer-provider model
- be able to communicate clearly and interactively in English
- be able to read and write professional documents

47AOMAS5 Management and Acquisition of Information Systems: 5 ECTS

Learning outcomes

- understand the strategic uses of information technology
- be able to define the requirements for the system being acquired
- be able to model an organization's current functions, processes and data stores
- be able to evaluate how a system impacts an organization, its finances and the environment
- be able to search and evaluate options
- be able to design customer support solutions

47AOSAD05 Information Systems Analysis and Design: 5 ECTS

Learning outcomes

- be able to design information systems that support business processes
- understand the importance of system requirements in systems design
- be able to apply essential descriptive notations
- be able to apply the main principles of usability
- be able to work in an international team

LIIT16-1020 eBusiness Solutions: 15 ECTS

Learning outcomes of the study module

Student will

- be able to implement a web shop and promote it

- understand the financial principles of eCommerce
- understand the principles and effects of integrated eBusiness

Courses included in the study module

- eCommerce 5 ECTS
- eBUSINESS 5 ECTS
- Practical eBusiness Development 5 ECTS

47AOEB005 eBusiness: 5 ECTS

Learning outcomes

The student will

- be able to describe the concept of the business value chain
- understand the concepts of the internet, intranet and extranet and will know the possible technologies used in their implementation
- understand the concepts of CAD, ERP, MES, APS and CRM and knows the possible technologies used in their implementation
- understand the function of interfaces between different information systems
- be able to define interfaces between different information systems
- understand the concepts of JIT and LEAN Contents Value chain

47AOEC005 eCommerce: 5 ECTS

Learning outcomes

The student will

- know web business models and can identify their applications
- be able to select an appropriate web business model
- be able to select an appropriate and suitable e-commerce solution
- be able to implement a functional web shop using a web shop service solution
- understand the key concepts of e-marketing
- be able to apply the potential offered by e-marketing in business

47AOPEBD5 Practical eBusiness Development: 5 ECTS

Learning outcomes

The student will

- be able to describe the structure of existing information systems in an organization
- be able to identify potential targets for development in eBusiness
- be able to analyse the system requirements of a specific enterprise information system development
- be able to implement a solution for eBusiness development

LIIT16-1021 Elective Studies: 15 ECTS

Courses included in the study module

Elective studies must be selected from the course offerings of higher education institutions.