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# Business Information Technology



## STUDY GUIDE 2013-2014

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<b>Finnish students</b>					
01SUO Asiantuntijaviestintä 4 ECTS	4				4
<ul style="list-style-type: none"> <li>01SUOA Asiantuntija viestintä (3 ECTS)</li> </ul>					
<ul style="list-style-type: none"> <li>01PINFO Informaatiol ukutaito (1 ECTS)</li> </ul>					
01RUO Ruotsin kieli (Swedish language) 3 ECTS	3				3
<ul style="list-style-type: none"> <li>01RUOK kirjallinen osio (1,5 ECTS)</li> </ul>					
<ul style="list-style-type: none"> <li>01RUOS suullinen osio (1,5 ECTS)</li> </ul>					
<b>Foreign students</b>					
04SUO806E Basics of Finnish 1, 3 ECTS 1)	3				3

04SUO807E Basics of Finnish 2, 4 ECTS 1)	4				4
01ENG English 3 ECTS (integrated into common ICT and business studies)	3				3
01PENT Introduction to Entrepreneurship 4 ECTS		4			4
<b>COMMON ICT STUDIES 35 ECTS</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	
<b>Computers as a Tool 10 ECTS</b>					
47MYEU003 Use of Computers 3 ECTS	3				3
47MYOS004 Hardware and Operating Systems 4 ECTS	4				4
47MYP1003 Green ICT Project 1 3 ECTS	3				3
<b>Introduction to Information Systems Development 15 ECTS</b>					
47MYPR004 Introduction to Programming 4 ECTS	4				4
47MYMT004 ICT-Mathematics 4 ECTS	4				4
47MYWW004 WWW Technologies 4 ECTS	4				4
47MYP2003 Green ICT Project 2 3 ECTS	3				3
<b>Object-oriented Programming and Databases 10 ECTS</b>					

47MYOP004 Object-oriented Programming 4 ECTS		4			4
47MYDB003 Databases 3 ECTS		3			3
47MYP3003 Green ICT Project 3 3 ECTS		3			3
<b>BUSINESS SYSTEMS ENVIRONMENT 21 ECTS</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	
04BUS602/2 Human Resources 4 ECTS	4				4
04BUS602/3 Financial Management 4 ECTS	4				4
04BUS602/4 Customer Relations and Marketing 4 ECTS	4				4
04BUS602/5 Logistics 4 ECTS	4				4
04BISD01 Information Systems in Business 5 ECTS	5				5
<b>PROFESSIONAL STUDIES 70 ECTS</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	
<b>Obligatory Professional Studies 30 ECTS</b>					
<b>Business Processes and Information Systems Design 15 ECTS</b>					
47AOPIS03 Business Processes and Information Systems 3 ECTS		3			3
47AOSAD05 Information Systems Analysis and Design 5 ECTS		5			5

47AOPM002 Project Management 2 ECTS		2			2
47AOCDE04 Professional Communication and ICT Documentation in English 5 ECTS		5			5
<b>Information Systems Development Process 15 ECTS</b>					
47AOSD005 Practices in Information systems Development 3 ECTS			3		3
47AOPR010 ICT Project 8 ECTS			8		8
47AOPME04 Project Management English 4 ECTS (integrated)			4		4
<b>Optional Professional Studies 40 ECTS</b>		<b>10</b>	<b>15</b>	<b>15</b>	<b>40</b>
<b>ELECTIVE STUDIES 15 ECTS</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	
<b>PRACTICAL TRAINING 30 ECTS</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	
<b>RESEARCH, DEVELOPMENT AND INNOVATION SKILLS 25 ECTS</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	
<b>Orientation to Research 10 ECTS</b>					
04TUT601E/1 Research Methods 3 ECTS		3			3
04TUT601E/2 Statistical Analysis 2 ECTS		2			2
<b>and</b>					
04TUT602E/1 Inferential Statistics and SPSS 3 ECTS			3		3

04TUT602E/2 Academic Writing 2 ECTS			2		2
<b>or</b>					
04TUT603E/1 Qualitative Research Methods 3 ECTS			3		3
04TUT602E/2 Academic Writing 2 ECTS			2		2
<b>or</b>					
47RDDSM03 Design Science Methods for ICT Research 3 ECTS			3		3
04TUT602E/2 Academic Writing 2 ECTS			2		2
<b>THESIS 15 ECTS</b>			<b>5</b>	<b>10</b>	<b>15</b>

1) Foreign students: Basic Finnish 1 and Basic Finnish 2

## DEGREE PROGRAMME IN BUSINESS INFORMATION TECHNOLOGY 210 ECTS

### Degree

Tradenomi, Bachelor of Business Administration (BBA)

### Duration

210 ECTS, 3.5 years

### Objectives

The studies are focusing on developing experts with generic working life competencies as well as programme based competences, that are needed to manage versatile demanding tasks in the future business life. Generic competences are communication and cooperation skills, abstract, analytical and critical thinking, research and development skills, entrepreneurial thinking, learning skills and self-efficacy as well as ethical responsibility. Programme based competencies are business competence, business application software competence, information system knowledge, ICT infrastructure competence as well as ICT project competence and special knowledge in one's own expertise area.

The programme aims at providing the students with the knowledge and skills needed in the modern intranet and internet technologies in business. The programme provides qualifications to design, implement and manage information systems. In the development of information systems, the focus is on systems management and design by using modern application development methods and tools. The programme places a high priority on meeting the needs of software development and information systems management in a networked business environment. Special focus is placed on graphical software and user interface design and also on the use of object and component technologies. The students will also study the role of ICT as a business opportunity and learn how to manage and use it as a driver for organisational change.

The programme provides an excellent opportunity to work as an information systems analyst for the software industry in Finland and abroad. In addition to the theoretical studies of information science, the programme also includes practical training in business. After two years of classroom studies the students work for five months as trainees in industry. The students also complete a software design and implementation project for a local organisation.

### Structure and process of studies

The study program is based on modules of theory and practical contents. The professional skills will be studied in their real business context in co-operation with local business life. As far as the studies progress, the students do advanced ICT design and implementation projects as well as the final thesis as an applied case study for a local organization.

### **Basic studies**

The programme includes common basic studies (14 ECTS), business studies (21 ECTS) and common ICT studies (35 ECTS). The basic studies aim at getting a common base for the further advances studies.

### **Professional studies**

During the second and third year the student acquires the professional skills required for designing, constructing and using information systems. The student also learns to plan the strategic use of information technology on the whole company level.

### **Practical training and thesis**

The student learns to use and develop his/her practical professional skills during his practical training period (30 ECTS). After the practical training period, the student attends more challenging ICT project and finally, at the end of the studies, conduct a research study based on real working life cases (15 ECTS).

## **BASICS STUDIES 70 ECTS**

### **BASICS STUDIES 70 ECTS**

### **COMMON BASIC STUDIES 14 ECTS**

#### **COMMON BASIC STUDIES 14 ECTS**

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 at preparing them for working life and self-development.

The common basic studies orientate the students towards other studies which concentrate on specialised professional skills. Common basic studies, 14 ECTS, consist of courses which are compulsory to all native Finnish students. Any course within the common basic studies can be compensated by an equivalent course with entirely or partially same content taken in another university. Before compensation a proof for taking the course elsewhere must be submitted.

### **ASiantuntijaviestintä 4 ECTS**

#### **01SUO ASiantuntijaviestintä 4 ECTS**

Toteutetaan Lahden ammattikorkeakoulun yleisen suunnitelman mukaisesti.

<sup>1)</sup> Foreign students: substitutive course is Basic of Finnish 2.

### **Ruotsin kieli 3 ECTS**

#### **01RUO Ruotsin kieli 3 ECTS**

Toteutetaan Lahden ammattikorkeakoulun yleisen suunnitelman mukaisesti.

<sup>1)</sup> Foreign students: substitutive course is Basic of Finnish 1.

### **Basics of Finnish 1, 3 ECTS**

#### **04SUO806E Basics of Finnish 1, 3 ECTS**

NB! Only for foreign students!

#### ***Learning Objectives***

The student

- knows the very basic vocabulary and phrases for common everyday situations
- can speak a little about him/herself and understands basic phrases
- is able to read and write short and simple sentences.

## **Contents**

Personal data, family and living, languages, countries, nationalities, greetings, thanking, asking, basic situations in everyday life, cardinal numbers, money and units of measure, time and calendar, seasons and weather. Basic types of nouns, verb types, present tense of the verbs (positive, negative, question), basics of consonant gradation (strong-weak grade), vowel harmony, basic pronouns, cardinal numbers, imperative and conditional in basic phrases.

## **Assessment and evaluation**

Attendance and activity of the course, portfolio and the passing of the final exam. Evaluation: 1-5.

## **Materials**

White, L. 2007. From Start to Finnish: A Short Course in Finnish. Helsinki: Finn Lectura.

Materials provided by the lecturer

## **BASICS OF FINNISH 2, 4 ECTS**

### **04SUO807E BASICS OF FINNISH 2, 4 ECTS**

NB! Only for foreign students!

## **Learning Objectives**

The student

- can communicate in most common everyday situations
- is able to understand slowly and clearly spoken Finnish provided the topic and the vocabulary are connected with his/her own life and experience
- understands the key idea of a simple message or text and **is able** to write one **by** him/herself
- knows the most common vocabulary and some grammatical structures of Finnish.

## **Contents**

Spending free time, the most common occupations and workplaces, food and drinks, traffic and travelling, communication in everyday situations, health, sickness, dressing-up, basic adjectives and adverbs, 50 basic verbs, partitive, genitive, nominative plural and local cases in different word types, possessive sentences, essive in time expressions, present tense of passive and object in practice.

## **Assessment and evaluation**

Attendance and activity of the course, portfolio and the passing of the final exam.

Evaluation: 1-5.

## **Materials**

White, L. 2007. From Start to Finnish: A Short Course in Finnish. Helsinki: Finn Lectura.

Materials provided by the lecturer

## **ENGLISH 3 ECTS**

### **01ENG ENGLISH 3 ECTS**

## **Learning objectives**

The student

- develops a strong professional identity through the use of English
- knows how to use electronic tools for language learning
- 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 working life functions.

## **Contents**



Orientation towards studies in business information technology, jobs and employment, the job application process, writing, speaking and listening skills (integrated into common ICT and business studies).

**Prerequisites**

Advanced level in English.

**Assessment and evaluation**

Course work and exam, compulsory class attendance.

Evaluation: 1-5.

**Materials**

Indicated by the lecturer.

**INTRODUCTION TO ENTREPRENEURSHIP 4 ECTS**

**01PENT INTRODUCTION TO ENTREPRENEURSHIP 4 ECTS**

**Learning objective**

The student

- gets acquainted with entrepreneurship as an option to wage work and as a life strategy.
- gets to reflect on his/her personal capabilities for running a business, but also on general conditions and obstacles in business life.

**Contents**

The course gives facilities to plan and evaluate business ideas. Basic concepts of entrepreneurship, business plan and business idea. Visiting lecturers from Incupation Center and example entrepreneurs will give their input to the course also.

**Assessment and evaluation**

Active participation in lectures. Individual and group exercises, business plan 50 %, written exam 50 %. Both tasks must be passed.

Evaluation: 1-5.

**Materials**

Will be handed during lectures.

**COMMON ICT STUDIES 35 ECTS**

**COMMON ICT STUDIES 35 ECTS**

**Computers as a Tool 10 ECTS**

**Computers as a Tool 10 ECTS**

**Learning objectives**

The student

- will get an introduction to the software related to his/her studies, office software and operating system. He or she will have basic understanding of computer and information security.

**USE OF COMPUTERS 3 ECTS**

**47MYEU003 USE OF COMPUTERS 3 ECTS**

**Learning objectives**

The student

- learns to use the basic software needed in his/her studies and office work.

#### **Contents**

The student has the skills to use the software used in the learning environment. He creates documents with word processing, uses spreadsheets in calculation and makes presentation materials, and knows how to share them.

#### **Assessment and evaluation**

Course work, individual assignments, group work assignments, exam.  
Evaluation: 1-5.

#### **Materials**

Literature and other material provided. Modern office software and software in learning environment.

## **HARDWARE AND OPERATING SYSTEMS 4 ECTS**

### ***47MYOS004 HARDWARE AND OPERATING SYSTEMS 4 ECTS***

#### **Learning objectives**

The student

- understands the basics of computer operation and learns to use its operating system.

#### **Contents**

The student knows how to use the operating system. He has the basic understanding elements of computer and peripherals. He also has basic understanding of information security.

#### **Assessment and evaluation**

Course work, individual assignments, group work assignments, exam. Evaluation: 1-5.

#### **Materials**

Literature and other material provided.

## **GREEN ICT PROJECT 1 3 ECTS**

### ***47MYP1003 GREEN ICT PROJECT 1 3 ECTS***

#### **Learning objectives**

The student

- will get the basic skills in project working
- knows how to act as a an active member of a project team
- recognizes the different roles of the project participants
- knows how to independently acquire information and apply it to resolve the problems in the project
- knows how to design and implement a solution that meets the given simple project work requirements
- knows how to work both independently and in a team to achieve the given objectives
- understands the significance of the use of ICT in the ecological sustainable development.

#### **Contents**

The students learn to know how to independently and as a team member to acquire information for solving problems.

#### **Assessment and evaluation**

Project work, project presentation and project reports.  
Evaluation: 1-5.

#### **Materials**

Literature and other material provided.

## **Introduction to Information Systems Development 15 ECTS**

### **Introduction to Information Systems Development 15 ECTS**

#### **Learning objectives**

In this module the student will get an introduction to the basic methods and tools of a programmer. The module will develop analytical and logical skills required from a professional in information and communication technologies.

### **INTRODUCTION TO PROGRAMMING 4 ECTS**

#### ***47MYPR004 INTRODUCTION TO PROGRAMMING 4 ECTS***

#### **Learning objectives**

The student

- will get basic skills of programming. The main emphasis is on the logical analysis of programs.

#### **Contents**

The student understands general concepts of programming. He is able to make small computer applications.

#### **Assessment and evaluation**

Course work, individual and group work assignments, exams.  
Evaluation: 1-5.

#### **Materials**

Literature and other material provided. A software development tool.

## **ICT-MATHEMATICS 4 ECTS**

#### ***47MYMT004 ICT-MATHEMATICS 4 ECTS***

#### **Learning objectives**

The student

- will get the basic knowledge needed in computer science.

#### **Contents**

Mathematical fundamentals of computing and programming.

#### **Assessment and evaluation**

Course work, individual and group work assignments, exams.  
Evaluation: 1-5.

#### **Materials**

Literature and other material provided.

## **WWW TECHNOLOGIES 4 ECTS**

#### ***47MYWW004 WWW TECHNOLOGIES 4 ECTS***

#### **Learning objectives**

The student

- knows the structure of web-documents
- knows the foremost definitions of the languages used
- is able to add a little functionality to a web page

- is able to design and implement web sites
- understands the meaning of accessibility and usability.

#### **Contents**

(X)HTML, CSS, usability, accessibility.

#### **Assessment and evaluation**

Course work, individual, pair and group work assignments, exam.

Evaluation: 1-5.

#### **Materials**

Literature and other material provided.

## **GREEN ICT PROJECT 2 3 ECTS**

### ***47MYP2003 GREEN ICT PROJECT 2 3 ECTS***

#### **Learning objectives**

The student

- understands how to independently acquire information and apply it to resolve the problems in the project
- understands how to design and implement a solution that meets the given simple project work requirements
- understands how to work both independently and in a team to achieve the given objectives
- is able to take into account the ecological sustainable development in the project solution.

#### **Contents**

The students learn to understand how to independently and as a team member to acquire information for solving problems.

#### **Assessment and evaluation**

Project work, project presentation and project reports.

Evaluation: 1-5.

#### **Materials**

Literature and other material provided.

## **Object-oriented Programming and Databases 10 ECTS**

### **Object-oriented Programming and Databases 10 ECTS**

#### ***Learning objectives***

The student

- learn the fundamentals of object-oriented programming and how to use object-oriented approach to software development in business applications
- is also able to use relational databases as data storage of the applications.

## **OBJECT-ORIENTED PROGRAMMING 4 ECTS**

### ***47MYOP004 OBJECT ORIENTED PROGRAMMING 4 ECTS***

#### **Learning objectives**

The student

- learns the theory and principles of object-oriented programming
- is able to implement application by using an object-oriented programming language.

#### **Contents**

The student understands the concepts and fundamentals of object oriented approach. He is able to design and implement a computer program by using object oriented techniques. He also knows the syntax and semantics of an object-oriented programming language.

**Prerequisites**

47MYEU01 Use of Computers  
47MYPR01 Introduction to Programming

**Assessment and evaluation**

Course work, individual assignments, group work assignments, exam.  
Evaluation: 1-5.

**Materials**

An integrated development tool, code examples and reading material.

**DATABASES 3 ECTS**

***47MYDB003 DATABASES 3 ECTS***

**Learning objectives**

The student

- will get the basic skills to design, create and use databases.

**Contents**

The student

- is able to use Entity-Relationship (ER)-modelling technique in designing relational data bases
- knows the basics of SQL and is able to create queries using it
- is able to administrate a data base by using a data base management system
- understands its most essential efficiency aspects.

**Prerequisites**

47MYMT01 ICT-Mathematics

**Assessment and evaluation**

Course work, individual and group work assignments, exams.  
Evaluation: 1-5.

**Materials**

Literature and other material provided. Modern software development tools. A data base management system software and reading materials.

**GREEN ICT PROJECT 3 3 ECTS**

***47MYP3003 GREEN ICT PROJECT 3 3 ECTS***

**Learning objectives**

The student

- is able to independently acquire information and apply it to resolve the problems in the project
- is able to design and implement a solution that meets the given simple project work requirements
- is able to work both independently and in a team to achieve the given objectives
- is able to take into account the ecological sustainable development in the project solution.

**Contents**

The students learn how to independently and as a team member to acquire information for solving problems.

**Assessment and evaluation**

Project work, project presentation and project reports.  
Evaluation: 1-5.

### **Materials**

Literature and other material provided.

## **BUSINESS SYSTEMS ENVIRONMENT 21 ECTS**

### **BUSINESS SYSTEMS ENVIRONMENT 21 ECTS**

#### **Learning objectives**

The student

- will get an introduction to business environment, it's operating and area functions
- learns how information technology is embedded and used in these systems.

## **Human Resources 4 ECTS**

### **04BUS602/2 HUMAN RESOURCES 4 ECTS**

#### **Learning objectives**

The student

- is capable of managing and maintaining performance based human resources in contemporary multicultural and multinational organizations.

#### **Contents**

Main attention will be paid to the following issues: Strategic HR planning, recruitment, selection, orientation, training & development, career planning, job design, motivation, wage administration, rewards & benefits, employee relationship, collective bargaining, dispute resolution, disciplinary measures, building performance based HR, international issues in HRM.

#### **Assessment and evaluation**

Active participation in the course, course paper and course exam.

Evaluation: 1-5.

#### **Materials**

De Cenzo & Robbins. Human Resource Management. John Wiley & Sons, Inc, New York.

## **Financial Management 4 ECTS**

### **04BUS602/3 FINANCIAL MANAGEMENT 4 ECTS**

#### **Learning objectives**

The student

- understands financial information and financial management as part of corporate operations
- knows the different areas of accounting
- is able to examine the profitability of companies using marginal costing technique
- learns how to set prices on products and to produce budgets
- acquires the skills to use calculations in decision making.

#### **Contents**

Financial management as part of corporate operations, cost concepts, cost-volume-profit analysis, marginal costing, financial ratios, pricing decisions, budgeting.

#### **Assessment and evaluation**

Individual assignment, written exam.

Evaluation: 1-5.

### ***Materials***

Materials provided/announced by the lecturer.

## **Customer Relations and Marketing 4 ECTS**

### **04BUS602/4 CUSTOMER RELATIONS AND MARKETING 4 ECTS**

#### ***Learning objectives***

The student

- understands the value of customer oriented thinking in corporations
- knows the basic concepts and tools of marketing
- is able to pursue them in a business context.

#### ***Contents***

Customer oriented approach in business, marketing environments, customer relationship marketing, consumer behaviour and purchasing process, marketing mix: product, price, place, promotion.

#### ***Assessment and evaluation***

Contact lectures, exam, course work.

Evaluation: 1-5.

### ***Materials***

Kotler, P, Armstrong, G. 2004. Principles of Marketing.

## **Logistics 4 ECTS**

### **04BUS602/5 LOGISTICS 4 ECTS**

#### ***Learning objectives***

The student

- knows the role of the logistics operations in a company
- understands the importance and opportunities of logistics from the operational and financial returns perspective of the company
- knows how to use the most common tools of logistics planning and management: forecasting, inventory turn-over, ABC-analysis, optimising the size of delivery
- knows the stages of the purchasing process
- understands the terms of delivery as an important part of the purchasing contract.

#### ***Contents***

Basic terms of logistics – integrated logistics, logistics costs and the meaning of logistics to the profitability of a company, demand forecasting, purchasing, warehousing.

#### ***Assessment and evaluation***

Virtual course, home tests, open book final exam.

Evaluation: 1-5.

### ***Materials***

Materials provided/announced by the lecturer.

## **Information Systems in Business 5 ECTS**

## **04BISD01 INFORMATION SYSTEMS IN BUSINESS 5 ECTS**

### ***Learning objectives***

The student

- gets a general overview and understanding about the use of information systems in business
- knows the common application areas of information systems as well as the common problems and challenges of information technology.

### ***Contents***

Information Technologies, Business Applications, Strategic Issues of IS.

### ***Assessment and evaluation***

Participation to contact lessons and learning assignments, information skills test.  
Evaluation: 1-5.

### ***Materials***

James A. O'Brien, Introduction to Information Systems, McGraw-Hill.

## **PROFESSIONAL STUDIES 70 ECTS**

### **PROFESSIONAL STUDIES 70 ECTS**

### **Business Processes and Information Systems Design 15 ECTS**

### **Business Processes and Information Systems Design 15 ECTS**

#### **Learning objectives**

The student

- knows and is able to use the basic approaches in developing information systems
- understands the effective use of business information systems
- understands the importance of communication in business processes and information systems design
- communicates and produces documents in fluent English.

## **BUSINESS PROCESSES AND INFORMATION SYSTEMS 3 ECTS**

### **47AOPIS03 BUSINESS PROCESSES AND INFORMATION SYSTEMS 3 ECTS**

#### ***Learning objectives***

The student

- knows the main business processes in companies
- knows how information systems is applied in business processes
- understands the purpose of different types of information systems and their key functions and general applications
- understands how different types of systems are linked to each other and how their integration is implemented for effective use of data
- is able to model business processes.

#### ***Contents***

Key functions of business information systems. Business process mapping. Modeling business processes and integrated information systems. Visits to companies.

#### ***Prerequisites***

04BISD02 Information Systems Analysis and Design



### ***Assessment and evaluation***

Individual and group work assignments, exams.  
Evaluation: 1-5.

### ***Materials***

Literature and other material provided.

## **INFORMATION SYSTEMS ANALYSIS AND DESIGN 5 ECTS**

### **47AOSAD05 INFORMATION SYSTEMS ANALYSIS AND DESIGN 5 ECTS**

### ***Learning objectives***

The student

- is able to analyse user needs and requirements
- is able to develop models based on the requirements analysis.
- is able to plan the acquisition process

### ***Contents***

The students familiarize to information system and software architectures and use them in IS design.  
The students work in mixed inter-cultural groups.

### ***Prerequisites***

Sufficient knowledge of business (10 ECTS) and information systems (15 ECTS)

### ***Assessment***

Course work, individual assignments, group work assignments, exam.  
Evaluation: 1-5.

### ***Materials***

Literature and other material provided.

## **PROJECT MANAGEMENT 2 ECTS**

### **47AOPM002 PROJECT MANAGEMENT 2 ECTS**

### ***Learning objectives***

The student

- understands the tasks involved in project management
- is able to plan and track the project life cycle, resources and schedule using a project management tool.

### ***Contents***

Tasks of a project manager and a steering group. Use of a project management tool to manage a project.

### ***Assessment and evaluation***

Assignments and exam.  
Evaluation: 1-5.

### ***Materials***

Literature and other material provided

## **PROFESSIONAL COMMUNICATION AND ICT DOCUMENTATION IN ENGLISH**

## **47AOCDE04 PROFESSIONAL COMMUNICATION AND ICT DOCUMENTATION IN ENGLISH (integrated)**

### ***Learning objectives***

The student

- understands the importance of communication in business processes and information systems design
- is able to communicate clearly and interactively in English
- is able to read a professional textbook efficiently
- knows how to describe information systems and development processes
- produces documents in fluent English.

### ***Contents***

Reading, writing, speaking and listening skills.

### ***Prerequisites***

01ENG English (3 ECTS)

### ***Assessment***

Course work and individual assignments.

## **Information Systems Development Process 15 ECTS**

### **Information Systems Development Process 15 ECTS**

#### **Learning objectives**

The student

- is able to design new information systems and redesign present systems in project teams
- understands ICT specific approach in project management
- understands the importance of communication and documentation in ICT projects
- is able to communicate fluently in English.

## **PRACTICES IN INFORMATION SYSTEMS DEVELOPMENT 3 ECTS**

### **47AOSD005 PRACTICES IN INFORMATION SYSTEMS DEVELOPMENT 3 ECTS**

#### ***Learning objectives***

The student

- understands ICT project work and methods
- knows the tasks and processes of the ICT project
- is able to apply information system development methods in practice
- understands the importance of security issues and testing.

#### ***Contents***

ICT project process models and management techniques, practical methods in information systems development.

#### ***Prerequisites***

Business studies (10 ECTS), ICT studies (15 ECTS), and project studies (5 ECTS).

#### ***Assessment***

Individual and group work assignments, exam.

#### ***Materials***

Literature and other material provided. Modern software development, project management and other appropriate tools.

## **ICT PROJECT 8 ECTS**

### **47AOPR010 ICT PROJECT 8 ECTS**

#### ***Learning objectives***

The student

- is able to act as a project member and manager in an ICT project
- is able to implement a solution for an ICT related problem in real business environment.

#### ***Contents***

A project which is implemented in co-operation with the local industry in a real business context.

#### ***Prerequisites***

Business studies (10 ECTS), professional ICT studies (15 ECTS), and project studies (5 ECTS).

#### ***Assessment***

Project process, project work, seminar presentations.

## **PROJECT MANAGEMENT ENGLISH 4 ECTS (INTEGRATED)**

### **47AOPME04 PROJECT MANAGEMENT ENGLISH 4 ECTS (INTEGRATED)**

#### ***Learning objectives***

The student

- understands the importance of communication and documentation in ICT projects
- knows the different aspects of project communication
- is able to manage a project in English.

#### ***Contents***

Reporting, documenting, communication and presentations skills.

#### ***Prerequisites***

Professional communication and ICT documentation in English (5 ECTS)

#### ***Assessment***

Reports, project documentation, presentations.

## **OPTIONAL PROFESSIONAL STUDIES 40 ECTS**

### **OPTIONAL PROFESSIONAL STUDIES 40 ECTS**

### **ELECTIVE STUDIES 15 ECTS**

### **ELECTIVE STUDIES 15 ECTS**

The student can select his/her elective studies from his/her own degree programme or from the other degree programmes within Lahti University of Applied Sciences. Studies from other polytechnics and universities can also be chosen. In that case he/she must have the selected courses approved to the personal study plan in advance.

## **PRACTICAL TRAINING 30 ECTS**

## **PRACTICAL TRAINING 30 ECTS**

A continuous 30 ECTS practical training period is carried out during the studies (if the student wants to do the practical training before the polytechnic studies, he/she has to submit a separate application). The work must be development work in IT. There will be two seminars about practical training; in the first one the student introduces the place of employment, and in the second one a problem concerning the organization's information system or data processing. Practical training is supervised, and a written contract about the traineeship will be made with the organization. Practical training may take place after the first year at the earliest, but it is recommended to carry it out after two years of studies in the first two periods of the third year (from the beginning of June till the end of December). International students will get assistance in finding placements.

## **RESEARCH, DEVELOPMENT AND INNOVATION SKILLS 25 ECTS**

### **RESEARCH, DEVELOPMENT AND INNOVATION SKILLS 25 ECTS**

#### **Orientation to Research 10 ECTS**

##### **Orientation to Research 10 ECTS**

###### **Learning objectives**

The student

- knows the most important principles, approaches and research methods of information systems science.

#### **RESEARCH METHODS 3 ECTS**

##### **04TUT601E/1 RESEARCH METHODS 3 ECTS**

###### ***Learning objectives***

The student

- gets an overview of the process, nature and research methods of the thesis.
- knows how to carry out the research tasks of the thesis.

###### ***Contents***

Research focus and problem, research approaches, research framework, literature review, structure of the thesis, philosophical approaches and ethical issues, quantitative and qualitative research methods, data collection, data analysis, and reliability and validity.

###### ***Prerequisites***

Minimum of 120 ECTS of studies

###### ***Assessment***

Course work, individual and group work assignments, exams.

###### ***Materials***

Research Methods for Business Students, Mark Saunders, Philip Lewis and Adrian Thornhill, Prentice Hall,

Chapters 1-5, 8-10 and 13.

## **STATISTICAL ANALYSIS 2 ECTS**

### **04TUT601E/2 STATISTICAL ANALYSIS 2 ECTS**

###### ***Learning objectives***

The student knows how to deal with the most commonly used statistical methods

## **Contents**

- sampling and sample size effect
- measuring scales of variables
- presentation of statistical data
- descriptive measures

## **Prerequisites**

Texts, spreadsheets and presentation graphics.

## **Assessment**

Participation in contact teaching, individual and group works, assignments and/or exam. Evaluation: 0-5.

## **Materials**

Quantitative Methods and Reporting 04TUT602E and Qualitative Methods and Reporting 04TUT603E are elective modules and they take place during the third academic year. The student has to choose one of the following modules.

# **INFERENCEAL STATISTICS AND SPSS 3 ECTS**

## **04TUT602E/1 INFERENCEAL STATISTICS AND SPSS 3 ECTS**

### **Learning objectives**

The student

- knows how to process and report the quantitative data definitively
- knows how to use SPSS software as an analysis tool
- knows both descriptive and inferential statistics and is able to use multivariate methods as well
- understand the research problem and is able to choose the right methods to analyse data
- is able to conduct a demanding quantitative research
- has the basic skills in academic writing
- knows how to write an abstract for a study.

## **Contents**

SPSS software as an analysis tool. Creating a database in SPSS. Frequency distributions, descriptive statistics and graphical presentations. Relationships between two variables. Hypothesis testing. Multivariate methods. Academic writing skills.

## **Prerequisites**

04TUT601E Analysis Methods.

## **Assessment and evaluation**

Participation in contact teaching, individual and group works, projects and reporting. Evaluation: 1-5.

## **Materials**

Lectures and literature indicated by the lecturer.

# **ACADEMIC WRITING 2 ECTS**

## **04TUT602E/2 ACADEMIC WRITING 2 ECTS**

### **Learning objectives**

The student

- perfects his/her academic reading and writing skills in view of his/her thesis.

## **Contents**

Finding and assessing source material, reading an academic text (skimming and mind mapping), writing an academic text (summarizing and

reporting, structuring information, academic style and word choice, grammar reference, data commentary, source referencing, list of references).

**Prerequisites**

All other compulsory English courses.

**Assessment**

Individual assignments, final report/research plan for either Quantitative or Qualitative Research Methods.

Compulsory class attendance.

**Materials**

Reppu, materials provided by the lecturer.

**QUALITATIVE RESEARCH METHODS 3 ECTS**

**04TUT603E/1 QUALITATIVE RESEARCH METHODS 3 ECTS**

**Learning objectives**

The student

- is able to carry out a research and write a research report about the topic of his thesis.

**Contents**

Features of qualitative research methods, research framework, theory and data based approach, research plan, Case Study, Action Research, Design Science, data collection and analysis, and reliability and validity

**Prerequisites**

04TUT601E/1 Research Methods 3 ECTS

04TUT601E/2 Statistical Analysis 2 ECTS

**Assessment**

Course work (Research paper), individual and group work assignments

**Materials**

Miles, Matthew B. & Huberman, Michael A. (1994). Qualitative Data Analysis

Robert K.Yin CASE STUDY RESEARCH, Design and Methods

**Design Science Methods for ICT Research 3 ECTS**

**47RDDSM03 Design Science Methods for ICT Research 3 ECTS**

**Learning objectives**

The student

- knows the role of innovation and design in organization
- traditional science and design-type research
- is able to design and conduct a design research and write a research report about it.

**Contents**

Action Research, Characteristics of Design-Type research, principles of artifact building, evaluating and testing the artifact, and Design-Type Research in information systems.

**Prerequisites**

04TUT601E/1 Research Methods 3 ECTS  
04TUT601E/2 Statistical Analysis 2 ECTS

### **Assessment**

Course work, individual and group work assignments, exams.

## **THESIS 15 ECTS**

### **THESIS 15 ECTS**

#### **Objectives and contents**

The aim of the thesis is to develop and demonstrate the student's abilities to use his/her knowledge and skills in research and development. The subject of the thesis must be working-life oriented and correspond to the student's field of studies. The thesis is a process that includes acquiring the knowledge and necessary skills, choosing the subject, planning and carrying out the research work, reporting and presenting the work. The work will be assessed.

#### **Prerequisites**

Orientation to Research 10 ECTS. The courses Qualitative Research Methods and Reporting 3 ECTS and Quantitative Research Methods and Reporting 3 ECTS are designed to support the writing of the thesis. Before the students can start the thesis, it is required they have accomplished most of the professional studies of the Degree Programme.