



**Lahden ammattikorkeakoulu
Liiketalouden laitos, Lahti**

Degree Programme in Business Information Technology

**Lahden ammattikorkeakoulu
Liiketalouden laitos**

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ke klo 9.00 - 18.00
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**YHTEISKUNTATIETEIDEN, LIIKETALOUDEN JA HALLINNON ALA
LIIKETALOUDEN KOULUTUSOHJELMA**

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DEGREE PROGRAMME IN INTERNATIONAL BUSINESS

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**LUONNONTIETEIDEN ALA
TIETOJENKÄSITTELYN KOULUTUSOHJELMA
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DEGREE PROGRAMME IN BUSINESS INFORMATION TECHNOLOGY

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Liiketalouden laitos**

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LIKOTALOUDEN KOULUTUSOHJELMA**

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**LUONNONTIETEIDEN ALA
TIETOJENKÄSITTELYN KOULUTUSOHJELMA**

Yritysviestintäjärjestelmät
Yliopettaja Harri Kokkonen
Puh. (03) 828 5003

YHTEISKUNTATIETEIDEN, LIKOTALOUDEN JA HALLINNON ALA

Tutkinto

Koulutusohjelmien tutkinnot johtavat liiketalouden ammattikorkeakoulututkintoon. Tutkintonimike on tradenomi (ruotsin kielellä tradenom, englannin kielellä Bachelor of Business Administration, BBA).

Tutkintonimike

Tradenomi

Laajuus

140 ov, 3,5 vuotta

Koulutusohjelmien opinnoista ja tutkinnoista vastaavat Liiketalouden laitos, Lahti ja Liiketalouden laitos, Heinola. Perusopinnojen jälkeen opiskelija valitsee yhden koulutusohjelmansa suuntautumisalan.

Liiketalouden koulutusohjelma

Suuntautumisalat

Markkinointi (Lahti)

Talouhallinto (Lahti)

Markkinointiviestintä (Heinola)

Yrityshallinto (Heinola)

LUONNONTIETEIDEN ALA

Tutkinto

Koulutusohjelmien tutkinnot johtavat liiketalouden ammattikorkeakoulututkintoon. Tutkintonimike on tradenomi (ruotsin kielellä tradenom, englannin kielellä Bachelor of Business Administration, BBA).

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Tietojenkäsittelyn koulutusohjelma

Suuntautumisalat

Sovelluskehitys (Lahti)

Yritysviestintäjärjestelmät (Heinola)

Kansainvälisen kaupan koulutusohjelma

Degree Programme in International Business

Degree Programme in Business Information Technology

TUTKINTOJEN RAKENNE

Opintojen laajuus on 140 opintoviikkoa (ov) ja ne muodostuvat seuraavasti:

Perusopinnot

Perusopinnot koostuvat ammattikorkeakoulun kaikille yhteisistä perusopinnoista ja koulutusohjelman perusopinnoista. Perusopinnot suoritettuaan opiskelijalla on perustaidot ja -valmiudet, jotka kannustavat ulkoiseen ja sisäiseen yrittäjyyteen sekä innovatiivisuuteen ja vuorovaikutukseen yritystoiminnassa.

Ammattiopinnot

Ammattiopinnot koostuvat suuntautumisalan pakollisista opinnoista, vapaasti valittavista opinnoista, harjoittelusta ja opinnäytetyöstä.

DEGREE PROGRAMME IN BUSINESS INFORMATION TECHNOLOGY

Degree

Tradenomi, Bachelor of Business Administration (BBA)

Duration

140 credits (210 ects), 3.5 years

Objectives

The programme aims at providing the students with the knowledge and skills needed to make full use of modern intranet and Internet technologies in business. It provides qualifications to design and implement information systems using modern application development methods and tools. The programme places a high priority on meeting the needs of software development in a networked business environment. A special focus is placed on graphical software and user interface design and also on the use of object and component technologies.

The programme provides an excellent opportunity to work as an information systems analyst for the software industry both in Finland and abroad. In addition to the theoretical studies of information science, the program 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. At the final stage of the studies all students complete a thesis in which they are encouraged to approach the research area in both a theoretical and practical manner within the area of business information systems.

Studies	Year				
	1	2	3	4	Σ
COMMON BASIC STUDIES	10				10
PROGRAMME BASIC STUDIES	45				45
Business Environment and Information Systems					15
04LAS01E Finance Administration	4				
04ITEJU01E IT Law				3	
04LOG01E Logistics	2				
04ITEMR01E Marketing and Information Systems		2			
04ITEYR01E Business Process Re-engineering				2	
04YRI04E Corporate Business Plan			2		
Communication					9
04SUO02T Yritysviestintä	2				
04ITEMR02E Selling Expert Services				2	
04ITESD10E Project and Team Work		2			
04ITESD07E End-user Support		3			
Languages					6
04ENG04 IT English ¹⁾	2				
04ENG02 Business Contacts ¹⁾		2			
04ENG12 Advanced Communication Skills for Comp ¹⁾		2			
04RUO01 Svenska för företagare ¹⁾		2			
Computing					15
04ITEPR01E Introduction to Programming	4				
04ITEHW05E Hardware and Operating Systems	2				
04ITEEU02E Business Applications Software	3				
04ITEEU03E WWW and Structured Documents	1				
04ITEDB01E Database Systems	3				
04ITEHW06E Operating Systems Administration		2			
PROFESSIONAL STUDIES	40				40
Mathematics					4
04ITEMT01E Logic and Computing Mathematics	4				

Systems Analysis and Design					2	8
04ITESD01E	Information Systems Management				2	
04ITESD02E	Information Systems Analysis and Design		2			
04ITESD06E	Current Topics in System Analysis and Design		2			
04ITESD05E	User Interface Design		2			
Hardware						4
04ITEHW02E	Data Communications		2			
04ITEHW04E	Multimedia		2			
Programming						12
04ITEPR02E	Graphical Application Development	5				
04ITEPR07E	Object Oriented Programming		5			
04ITEPR08E	WWW Server Script Programming		2			
Data Management						2
04ITEDB03E	Database Modeling and Design				2	
Advanced professional studies					10	10
04TUTK01E	Research Methods				3	
04TUTK04E	Statistical Analysis		2			
04ITESD11E	IT Project				5	
ELECTIVE STUDIES					15	15
PRACTICAL TRAINING					20	20
THESIS					10	10
CREDITS IN TOTAL					140	

Structural changes for foreign students in the degree programme:

Finnish language and communication 8 cr consisting of

- 1) 5 credits compensating for the following courses:
 - 01SUOR1 Suomen kieli ja viestintä 2 cr
 - 01 RUOR1 Ruotsin kieli 1 cr
 - 04SUO02T Yritysviestintä 2 cr and
- 2) 3 credits included in elective studies

COMMON BASIC STUDIES 10 CR

The polytechnic 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 polytechnic common basic studies orientate the students towards other studies which concentrate on specialised professional skills. Common basic studies, 10 cr/15 ects, consist of courses which are compulsory to all students. Any course within the common basic studies can be compensated by an equivalent course with entirely or partially same content taken in another polytechnic or in a university . Before compensation a proof for taking the course elsewhere must be submitted.

Common basic studies 10 cr in Degree Programme in International Business

- Orientation to polytechnic studies 1 cr
- Finnish language and communication 2 cr
- Swedish language 1 cr
- Foreign language and communication 2 cr
- Philosophy 2 cr
- Introduction to entrepreneurship 2 cr

01JOHR1 ORIENTATION TO POLYTECHNIC STUDIES 1 CR/1.5 ECTS

Objectives and contents

The student is acquainted with Lahti Polytechnic, its operating principles, and his/her own faculty. The student learns what support and guidance is available for him/her during the studies.

Themes:

1. Lahti Polytechnic as a learning environment and support forms and methods at Lahti Polytechnic
2. Study benefits and aid and the Student Affairs Office
3. Library and Information Services
4. Student Union

The above items will be handled in one session during the first week of studying.

5. Studies and practical training abroad
6. Information acquisition task
7. Careers and Recruitment Services
8. "My studies at Lahti Polytechnic" - a personal recollection told by an alumnus/alumna

Assessment

Participation in lectures. A completed Information Pass on library and information services. Assessed pass/fail.

01SUOR1 SUOMEN KIELI JA VIESTINTÄ 2 OV

Ajankohta

Suositellaan suoritettavaksi ensimmäisen tai toisen lukuvuoden aikana.

Tavoitteet ja sisältö

Kirjoitusviestintä: Opiskelija hallitsee asiatyylisen kirjallisen viestinnän, osaa laatia erilaisia asiategstejä ja hallitsee asiakirjastandardin. Opintojakso on johdatus opinnäytetyöhön ja kypsyyskokeeseen, joissa on osattava laatia artikkeli ja tutkimusraportti. Puheviestintä: Opiskelija hallitsee keskustelutilanteet sekä osaa raportoida suullisesti.

Edeltävät opinnot

Opintojaksolle osallistuminen edellyttää tekstinkäsittelytaitoa.

Suoritustapa ja arviointi

Opintojakso toteutetaan joko laitospohjaisesti tai koulutusohjelmaraajat ylittävissä ryhmissä. Lähiopetusta on 40 t. Opintojakso suoritetaan osallistumalla aktiivisesti lähiopetukseen, tekemällä suulliset ja kirjalliset harjoitukset sekä kielenhuoltokoe. Opintojakso voidaan toteuttaa myös monimuoto-opetuksena.

Näyttökoe

Hyväksytty suoritus (vähintään H3) korvaa yhteisten opintojen suomen kielen ja viestinnän 2 ov:n opintojakson.

Näyttökokeessa tentitään joko

Repo, I. & Nuutinen, T. 2003. Viestintätaito. Opas aikuisopiskelun ja työelämän vuorovaikutustilanteisiin. Otava, Helsinki (tai vanhempi painos Aikuisten viestintätaito) tai

Nummi, J., Savola, T. & Hänninen, M. 2000. Tekniikan viestintä. Edita, Helsinki sekä

Itkonen, T. 2000. Uusi kieliopas. Tammi, Helsinki tai vastaava kielenhuollon opas.

Opiskelumateriaali

Luentomateriaali ja opintojakson alussa ilmoitettava kirjallisuus

01RUOR1 RUOTSIN KIELI 1 OV

Ajankohta

Opintojakso suoritetaan ensimmäisenä tai toisena lukuvuotena ennen ko. aineen jatko-opintoja. Liiketalouden laitoksen opiskelijat suorittavat opintojakson ensimmäisen lukuvuoden ensimmäisen lukukauden aikana.

Tavoitteet ja sisältö

Opiskelija suoriutuu arkielämän perustilanteista ja hallitsee kielen keskeiset rakenteet ja sanaston.

- kielen rakenteet

- sosiaalinen kanssakäyminen

- koulutus ja ammatit

- ammattikielen koulutusohjelmakohtaisesti eriytyvä käsittely, mikäli ei ole kyseessä koulutusohjelmaraajat ylittävä ryhmä, jolloin käsitellään ajankohtaisia aiheita eri elämäniloilta.

Edeltävät opinnot

Opintojaksolle osallistuminen edellyttää lukion B-kielen tasoista kielen hallintaa. Ylioppilaille ei järjestetä lähtötasokoea. Muut opiskelijat osallistuvat ennen ruotsin kielen opintoja kirjalliseen lähtötasokokeeseen. Kokeen läpäissyt (50 % oikein) on oikeutettu osallistumaan yhteisten opintojen ruotsin kielen opintojaksolle. Kokeessa hylätyt ohjataan täydentämään kielitaitoaan.

Näyttökoe

Ruotsin kielen korvaavana kokeena toimii pieni kielikoe. Opiskelija voi ilmoittautua suoraan kielikokeeseen, mikäli hän katsoo omaavansa valmiudet siitä suoriutumiseen. Pieni kielikoe on ruotsin kielen yhteiset opinnot (1 ov) korvaava asetuksen mukainen ja kielitaitolain, 149/22 edellyttämä koe.

Suoritustapa ja arviointi

Opintojakso voidaan toteuttaa sekä koulutusohjelmakohtaisissa että koulutusohjelmarajat ylittävissä ryhmissä. Se suoritetaan osallistumalla aktiivisesti lähiopetukseen sekä läpäisemällä suullinen ja/tai kirjallinen tentti.

01ENGR1 BASICS 2 CR/3 ECTS (Polytechnic common basic studies)**Objectives and contents**

The student has the necessary basic vocabulary, and written and oral communication skills needed in professional studies and at work. Main grammatical structures in the context of everyday business functions, practice in business and social situations, basics of business English including the terminology and concepts of the following fields:

- education and training for business
- jobs and employment, changes in working life, the job application process
- the route from raw materials to commodities
- entrepreneurship, various types of establishment, company profiles
- wholesaling and retailing
- international trade

Prerequisites

Advanced level in English

Assessment

Course work and exam, portfolio, compulsory class attendance.

Materials

Airas, P. & Junkkari, T. 1998. New Business Friend 1. WSOY, Porvoo.

01PHILR1 PHILOSOPHY 2 CR/3 ECTS

(taught in English)

Objectives and contents

The aim is to give philosophical view to professional skills and knowledge and to give conceptual tools to grasp the new and the different by control. Meaning, status, and control of prejudgement, of knowledge and of conceptual. The nature of one's speciality and problem of human being.

Assessment

Problem-solving exercises based on lectures and written exam based on philosophical text.

Materials

Indicated by lecturer

01JYTR1/01ENTR1 INTRODUCTION TO ENTREPRENEURSHIP 2 CR/3 ECTS**Objectives and contents**

The student gets acquainted with entrepreneurship as an option to wage work and as a life strategy. The course gives facilities to plan and evaluate business ideas. The student gets to reflect on his/her personal capabilities for running a business, but also on general conditions and obstacles in business life. The course deals with basic concepts of entrepreneurship, business plan, business idea.

Assessment

Active participation in lectures, individual and group exercises, course work, written exam. Contact teaching 28 h.

Materials

Will be handed during the lectures.

PROGRAMME BASIC STUDIES 45 CR

Business Environment and Information Systems 15 cr

04LAS01E FINANCE ADMINISTRATION 4 CR

Objectives and contents

The student acquires a basic knowledge of management accounting and its applications in decision making. The student also understands the financial information and the significance of bookkeeping as part of corporate operations and knows how to attend to it in a business environment.

- basics of management accounting
- basics of financial accounting

Assessment

Course work and exam

04ITEJU01E IT LAW 3 CR

Objectives and contents

The student will know the legislation needed in working as an IT professional

- contract law
- IT contracts
- privacy regulations
- publicity legislation
- personal registry law
- IT copyrights
- IT crimes

Assessment

Exercises, coursework, exam

Materials

Learning package

04LOG01E LOGISTICS 2 CR

Objectives and contents

The student successfully completing the course knows the terminology of logistics, understands the formation of the value chain and the opportunities logistics offers, masters the purchasing process and principles of warehousing as well as learns how to utilise development and control methods.

- logistics concept
- purchasing operations
- warehousing
- methods: forecasting models, inventory turnover, optimising size of deliveries, ABC analysis, supplier analysis, cost analysis

Assessment

Coursework, written exam

Materials

Learning package, lecture material

04ITEMR01E MARKETING AND INFORMATION SYSTEMS 2 CR

Objectives and contents

The student knows and understands the basic concepts of marketing. Furthermore, he/she understands the marketing procedures of a company, customer oriented operations and the information requirements involved.

- demand, competition, society as challenges for marketing
- gaining competitive advantage with the marketing mix tools
- customer relationship development as a competitive tool
- marketing information systems as a developer of a company's competitiveness

Assessment

Course work and exam

Materials

Learning package, recommended literature and trade magazines

04ITEYR01E BUSINESS PROCESS RE-ENGINEERING 2 CR

Objectives and contents

The students will learn the techniques and methods for ascertaining and developing business processes.

- the basis of planning business processes
- recognising the core processes
- modelling the processes under development
- re-planning of the processes under development
- analysing the impact of changes
- implementation plan

Prerequisites

04ENTR1 Introduction to entrepreneurship 2 cr

Assessment

Course work and written exam

04YRI04E CORPORATE BUSINESS PLAN 2 CR

Objectives and contents

The student will have the skills required to set up a business and prepare a business plan.

- setting up a business
- business concept
- analysing the operational environment
- preparing a business plan
- presenting a business plan

Prerequisites

04ENTR1 Introduction to entrepreneurship 2 cr, 04LAS01E Finance administration 4 cr

Assessment

Evaluation of the business plan made during the course

Communication 9 cr

04SUO02T YRITYSVIESTINTÄ 2 OV

Tavoitteet ja sisältö

Opiskelija osaa laatia liikeviestinnän rutiinikirjeet. Lisäksi hän oppii sisäisen ja ulkoisen tiedottamisen perusteet ja hallitsee suullisen ja kirjallisen suhdetoiminnan sekä työhakuun liittyvän suullisen ja kirjallisen viestinnän.

- kaupan rutiinikirjeet
- yrityksen sisäinen ja ulkoinen viestintä
- suullinen ja kirjallinen suhdetoiminta
- työhönottohaastattelut

Edeltävät opinnot

04SUOR1 Suomen kielen yhteiset perusopinnot 2 ov,

Suoritustapa ja arviointi

Aktiivinen osallistuminen lähiopetukseen, hyväksytyt kirjalliset ja suulliset harjoitukset, tentti.

Opiskelumateriaali

Kortetjärvi-Nurmi, Kuronen & Ollikainen 1997. Yrityksen viestintä. Edita.

Opettajan erikseen määräämää kirjallisuutta.

04ITEMR02E SELLING EXPERT SERVICES 2 CR

Objectives and contents

The student knows how to utilise interactive sales and negotiation skills in his/her work (developing and selling software and information systems), in relation to both internal clients and external customers.

- sales psychology
- interactive sales process
- requirements analysis as a part of the sales process
- sales negotiation practice (simulations)

Assessment

Videoring of presentations, exam

04ITESD10E PROJECT AND TEAM WORK 2 CR**Objectives and contents**

The student is familiar with the essential principles of project and team working and is able to run various projects.

- organising and controlling a project
- learning in a team and within an organisation
- teamwork

Assessment

Group work and a group assignment, exam

04ITESD07E END USER SUPPORT 3 CR**Objectives and contents**

The student learns how to plan and carry out an IT course. In addition, the aim is to be familiarised with the support services for end-users as a whole and the channels for acquiring support services.

Assessment

Lectures, group work, and related exercises and presentations, exam

Languages 6 cr**04ENG04 IT ENGLISH 2 CR/3 ECTS (previously Computing English)**

(Computing students only)

Objectives and contents

The course introduces the students specializing in computing the special vocabulary and concepts of the world of computing in English. The course covers the following themes:

- computers today (architecture, applications, peripherals)
- operating systems, GUIs, application programs, multimedia
- networks, the Internet, the WWW
- communication systems, computing support, data security
- software engineering
- recent developments in IT, the future of IT

Assessment

Course work and exam, compulsory class attendance.

Materials

Santiago Remarcha Esteras 2003. Infotech English for Computer Users. Cambridge University Press.

04ENG02 BUSINESS CONTACTS 2 CR/3 ECTS**Objectives and contents**

The aim of the course is to give participants an idea of the scope and requirements of effective corporate communication. The focus is on the following areas:

- exchanging messages in the new networked business environments; customer contacts face-to-face and ear-to-ear
- Modern written corporate communication:
- terms of business, inquiries, quotations, orders, shipping and invoicing, documents needed in international trade.

Prerequisites

01ENGR1 Basics

Assessment

Course work and exam, compulsory class attendance.

Materials

Airas, P. & Junkkari, T. 2001. New Business Friend 3. WSOY, Porvoo.

04ENG12 ADVANCED COMMUNICATION SKILLS FOR COMPUTING 2 CR

(Computing students only)

Objectives and contents

This course aims at enhancing the students' competence in dealing with demanding communication situations in the computing business. The participants learn how to write different types of information-oriented texts related to computing and how to make effective and convincing presentations in English. The writing skills course is partly carried out via the Internet.

Writing:

- structuring the information, flow, linking, appropriate style and word choice
- data commentary
- concluding and summarizing
- writing a thesis abstract
- reporting

Presentation skills:

- planning and structuring a presentation, use of visual materials, presentation techniques, language of presentations

Prerequisites

01ENGR1 Basics, 04ENG04 IT English

Assessment

Course work, compulsory class attendance

Materials

Indicated by the lecturer

04RUO01 FÖRETAGSSVENSKA 2 OV (entinen Svenska för företagare)**Tavoitteet ja sisältö**

Opiskelija hallitsee suullisen liikeviestinnän ja kaupallisen kielen keskeiset tilanteet: kaupankäynnin eri vaiheisiin liittyvät puhelut, neuvottelut ja vierailut sekä niiden järjestämisen. Yritys ja sen toiminnot.

Edeltävät opinnot

01RUOR1 Yhteiset opinnot, ruotsin kieli (1 ov)

Suoritustapa ja arviointi

Osallistuminen lähiopetukseen, portfolio, suullinen ja kirjallinen tentti.

Opiskelumateriaali

Opiskelukupaketti

Computing 15 cr**04ITEPR01E INTRODUCTION TO PROGRAMMING 4 CR****Objectives and contents**

The student has basic skills in commercial programming. The software tool used is a high level programming language or macro language. The main emphasis is on the logical analysis of programs.

- basics of program
- variables and constants
- program flow and structure
- basics of object oriented programming
- functions and subroutines
- processing files
- processing arrays
- basic algorithms
- programming language syntax
- coding and testing

Assessment

Course work, individual assignments and exam

Materials

Learning package, a textbook indicated by the lecturer.

04ITEHW05E HARDWARE AND OPERATING SYSTEMS 2 CR**Objectives and contents**

The student knows the structure and the functioning of computer equipment from the internal viewpoint of the computer and the operating system. He/She is also able to solve common problems concerning the use of a PC.

- the structure and the function of a computer
- the types of peripheral devices
- the types of operating systems
- memory management
- process management

Assessment

Course work, individual assignments, exam

Materials

Lecture material and literature indicated by the lecturer

04ITEEU02E BUSINESS APPLICATIONS SOFTWARE 3 CR**Objectives and contents**

The student knows the basic concepts of a PC's database softwares and knows how to use spreadsheet and database software in demanding business calculations.

Assessment

Individual assignments and exam

04ITEEU03E WWW AND STRUCTURED DOCUMENTS 1 CR**Objectives and contents**

The student knows the basic concepts of structured documents and how to prepare and publish them on the Internet.

- basics of structured documents
- principle of XML language
- XHTML (HTML) tags

Assessment

Course work, individual assignments and exam

Materials

Lecture material

04ITEDB01E DATABASE SYSTEMS 3 CR**Objectives and contents**

The student knows the basic concepts of relational databases. He/She knows the basics of relational database design issues and is able to use the SQL language for data search and update operations, and can handle simple database programming tasks.

- relational databases
- SQL language

Assessment

Individual assignments, exam

Materials

Stephens, R. K. & Plew, R. R. 2000. Teach Yourself SQL in 21 Days. Sams, USA.

04ITEHW06E OPERATING SYSTEMS ADMINISTRATION 2 CR**Objectives and contents**

The student is able to install an operating system to a computer in a network and act as a system administrator.

- installation of the operating system
- user and group control
- installation of software
- file system management
- data security

Prerequisites

04ITEHW05E Hardware and operating systems 2 cr

Assessment

Individual assignments, exam

PROFESSIONAL STUDIES 30 CR

Mathematics 4 cr

04ITEMT01E LOGIC AND COMPUTING MATHEMATICS 4 CR

Objectives and contents

The student understands the logical basis of computing and programming, and adopts the algorithmic way of thinking. The student manages the basics of central ideas of computing.

- logic (propositional calculus)
- number systems
- sets and relations
- data structures and algorithms

Assessment

Exams

Materials

Relevant literature indicated by the lecturer

Systems analysis and design 8 cr

04ITESD01E INFORMATION SYSTEMS MANAGEMENT 2 CR

Objectives and contents

The student becomes familiar with the role of the information management in an organisation. He/She

- is able to perceive the importance of information management and information technology in the organisational operations
- knows the main sectors of information management
- knows the models of information management organisation
- knows the main functions of information management within an organisation
- is able to perceive the relationship between an organisation and information technology in its organisational operations
- knows the basic principles of systems management
- knows the factors affecting the preparation of an IT strategy

Assessment

Lectures, individual written assignment, exam

Materials

Lecture material, literature indicated by the lecturer

04ITESD02E INFORMATION SYSTEMS ANALYSIS AND DESIGN 2 CR

Objectives and contents

The student is familiarised with the importance of information systems in a company's business operations and knows the phasing of building information systems. He/She learns the analysis and design of an information system and knows about database design.

Prerequisites

Business Applications Software, Database Systems

Assessment

Course work and exam

Materials

Literature indicated by the lecturer

04ITESD06E CURRENT TOPICS IN SYSTEM ANALYSIS AND DESIGN 2 CR

Objectives and contents

The aim of the course is to familiarize the students with the current topics and new methods in systems analysis and design.

Prerequisites

04ITESD02E Information systems analysis and design 2 cr

Assessment

Course work and exam

Materials

Literature indicated by the lecturer

04ITESD05E USER INTERFACE DESIGN 2 CR**Objectives and contents**

The student is able to design a user interface for a visual environment and to estimate its usability.

Assessment

Course work and exam

Hardware 4 cr**04ITEHW02E DATA COMMUNICATIONS 2 CR****Objectives and contents**

The student knows the general structure of data communications systems and is able to utilize different communications networks and services. He/She also knows how to prepare for the data security problems of the communications networks.

- principles of data communications
- general structure of data communications systems
- different communications networks
- information network services
- data security

Assessment

Assignments, exam

Materials

Relevant literature indicated by the lecturer

04ITEHW04E MULTIMEDIA 2 CR**Objectives and contents**

The student is familiarized with processing audiovisual information and its areas of application in business. He/She knows the multimedia configurations, business application programs, data transfer techniques and is able to apply the use of multimedia to business communications.

- applications
- hardware, data transfer and compression techniques
- multimedia tools and utility programs
- sound processing
- animations
- video processing

Prerequisites

04ITEEU02E Business Application Software 3 cr

Assessment

Course works and exam

Programming 12 cr**04ITEPR02E GRAPHICAL APPLICATION DEVELOPMENT 5 CR****Objectives and contents**

The student has the basic skills to develop business applications. One of the most widely used programming packages in the software industry will be used as a tool in the course.

- syntax of the programming language used
- graphical controls and objects
- object oriented programming
- using system classes
- programming graphics
- database processing

- the use of ready-made components and automation techniques
- Web Classes and programming

Prerequisites

04ITEPR01E Introduction to Programming 4 cr, 04IETDB01E Database Systems 3 cr (or in progress)

Assessment

Coursework and exam

Materials

Handouts, textbook of a programming language used in the course

04ITEPR07E OBJECT ORIENTED PROGRAMMING 5 CR**Objectives and contents**

The student has the skills to analyze and solve problems using the object oriented programming technology. The student knows a object oriented programming language.

- syntax of the selected programming language
- exception handling
- classes, objects, inheritance, encapsulation and polymorphism
- streams and packages
- graphical user interface

Prerequisites

04ITEPR02E Graphical Application Development 5 cr

Assessment

Coursework, individual assignments and exam

Materials

Handouts, a textbook of a programming language used in the course

04ITEPR08E WWW SERVER SCRIPT PROGRAMMING 2 CR**Objectives and contents**

The student has the basic skills to develop applications on the internet. He or she can use at least two methods to prepare the solution

- Internet Information Server
- Programming dynamic pages using PHP script language
- Programming dynamic pages ASP.NET

Prerequisites

04ITEPR02E Graphical Application Development 5 cr

Assessment

Coursework, individual assignments and exam

Materials

Handouts, a textbook of a programming language used in the course.

Data Management 2 cr**04ITEDB03E DATABASE MODELLING AND DESIGN 2 CR****Objectives and contents**

The student is able to use ER-modeling technique in designing relational databases, and can normalise database tables. He/She

also understands the most essential efficiency aspects concerning relational databases.

- ER-modeling
- normal forms
- efficiency aspects

Prerequisites

04ITEDB01E Database Systems 3 cr, 04ITESD02E Information Systems Analysis and Design 2 cr, 04ITEMT01E Logic and Computing Mathematics 4 cr (or in progress)

Assessment

Course work and exam

Materials

Teorey, T. J. 1999. Database Modeling & Design. 3rd ed. (Chapters 1-7). Morgan Kauffmann, San Francisco, CA. The student needs to have the book in his/her possession before the course starts.

ADVANCED PROFESSIONAL STUDIES 10 CR

04TUTK01E RESEARCH METHODS 3 CR

(Book exam)

Objectives and contents

The student knows the basic research approaches and is able to conduct independent empirical research, apply the research information and assess the overall reliability of the research results.

- background of business research
- applied and development research projects
- empirical research methods
- designing the research process
- data analysis and interpretation
- research project

Prerequisites

Business Applications Software

Assessment

Course work and exam, evaluation of a research project

04TUTK04E STATISTICAL ANALYSIS 2 CR

Objectives and contents

The student knows how to deal with frequency distribution and bivariate distribution and knows how to apply statistical tests.

- frequency distribution, graphics and statistics
- bivariate distribution, correlation contingency coefficient
- probability distributions
- statistical tests

Assessment

Course work and exam

Materials

Wagner, S. Introduction of Statistics.

04ITESD11E IT PROJECT 5 CR

Objectives and contents

The student learns to consider the subjects and courses in computing as one entity. He/She is able to analyse a customer's computing problems and needs. The student should be able to see the information system as a part of the whole of the operation of a business.

- project work
- designing, implementing, testing and changeover planning
- documentation

During the course, a new information system is designed, programmed, tested and implemented. The projects are taken from real life professional situations.

Prerequisites

04ITEPR01E Introduction to Programming 4 cr, 04ITEDB01E Database Systems 3 cr, 04ITEPR02E Graphical Application Development 5 cr, 04ITEPR07E Object Oriented Programming 5 cr, 04ITESD02E Information Systems Analysis and Design 2 cr, 04ITEPR08E WWW Server Script Programming 2 cr

Assessment

Seminars where the projects are presented. In addition, the completed, fully documented and tested system is assessed.

ELECTIVE STUDIES 15 CR

The student can select his/her elective studies from his/her own degree programme or from the other degree programmes within Lahti Polytechnic. 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 20 CR

A continuous 20 cr 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.

THESIS 10 CR

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 Work 5 cr/7.5 ECTS (Research Methods, Statistical Analysis, Research Process)

Before the students can start the thesis, it is required they have accomplished most of the professional studies of the degree programme.

Assessment

The thesis can be done individually or with another student. Students will have their own supervisor. Two persons appointed by the faculty assess the final thesis. Instructions for the reporting, seminars and assessment can be found in the Student Affairs Office in the Faculty of Business Studies.