VIDZEMES AUGSTSKOLA

FACULTY OF ENGINEERING
STUDY COURSE DESCRIPTION

Course Title:	**Introduction in Speciality**					
Course code (LAIS):	**InfT1002**					
Study programme:	**Information tehnologies**					
Level of Study programme:	☒	1st level professional higher education				
	☒	Professional Bachelor				
	☐	Professional Master				
	☐	Academic Master				
	☐	PhD level				
Type of Study programme:	☒	Compulsory course (Part A)				
	☐	Professional specialization courses (Part B, compulsory)				
	☐	Professional specialization optional courses (Part B, optional)				
	☐	Elective courses (Part C)				
Course Workload:	**Credits**		**ECTS**	**Academic hours**	**Contact hours**	**Independent work hours**
	4		6	160	64	96
Course Author/ Tutor:	**Sarma Cakula**					
	Professor, Ph.D					
	sarma.cakula@va.lv					
	Consultation: according to the schedule for each semester					
Study Form:	Full time studies/part time studies					
Study year, semester:	First study year, first semester					
Language:	Latvian, English					
Prerequisites for the Course:						
Course Summary:	The aim of the course is to acquaint students with basic knowledge about the theoretical basics of programming, viewing systems, final machines, Turing machine. To develop basic skills in algorithm compilation, programming, understanding of file and account system, their basic functions, basic skills in analyzing the theoretical issues and creating web pages. To acquaint students with the business environment and tasks of IT companies.					
Assessment:	**Final assessment consists of**: 1. Individual work in practical exercises during the course - 5 %. 2. Research paper in engineering - 40 %. 3. Exam – 30%					
Requirements for Credits:	**Requirements**: 1. Practical exercises must be prepared and delivered in determined time. 2. Required to attend seminars and workshops. Attendance of practical works is compulsory or individual tasks must be work off. 3. Positive evaluation must be received for in all practical works, control tests, exercises and pre-tests. 4. An in-depth study of an IT field should be developed. Evaluation: 1. Individual work in seminars and practical works - 5%, 2. Presentation and study - 35% 3. Test in the basics of programming - 25% 4. Examination mark - 35%.					
Abiding by the Academic Ethics	Students must abide by the academic and research ethics, Vidzeme University of Applied Sciences Ethics Regulations, incl.: – study papers must be independently developed; – the study work should reference all statements, ideas and data used that have been authored by someone else; – appropriate data acquisition methods should be used in the acquisition of data, the research ethics must be respected, empirical data must be collected independently and cannot be distorted or falsified;					

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	– the examination must be carried out by the student independently, without the use of supporting materials and/or consultations with other students, unless the lecturer states otherwise. In the event of non-compliance with the academic and research ethics, punishment is imposed in accordance with the ViA Ethics Regulations and the study course must be re-taken, unless the punishment is extramarital.
Learning Outcomes; the evaluation methods and criteria	**Learning Outcomes** / **The evaluation methods and criteria**
	Knowledge
	Understanding the Professional Standard and Requirements in accordance with the Study Program — Visiting and mastering lectures, practical works
	Understanding the theoretical fundamentals of programming — Visiting and mastering lectures, practical works
	Understanding of IT business activities and qualification of employees according to the company's specifics — Visiting and mastering lectures, practical works
	Skills
	Understand and orient in IT profession perspectives — 2 tests
	Understand number systems and the transition between them — 1 test
	Develop simple algorithms, automatic machines and Turing machines — 1 test
	Competency
	To orient in IT and IT applications — Valuation of research work
	Understand and apply basic algorithms — Test, exam
	Being able to communicate in the IT field — Valuation of research work presentation, participating in seminars
Course Compulsory literature:	1. June Jamrich Parsons, Dan Oja .New Perspectives on Computer Concepts 2012: Comprehensive - 23. lpp. Nelson education Ltd. 2011 Peter Linz. An Introduction to Formal Languages and Automata - 252. lpp. Jones and Bartlet Learning, 2011
Course additional literature:	Charles Petzold. Code: The Hidden Language of Computer Hardware and Software. Microsoft Press 2000, ISBN 0-7356-0505-X Internet resources
Course confirmation date:	22.05.2018.
Date of course description update:	

Study Course Plan:

Date	Theme	Academic hours		Study Form/ Organization of independent work of students and task description
		Contact hours	Independent work hours	
The date is specified before the implementation of the course	Operating system, basic structure, functions. Computer networks, global network, local area network, local area networks. Creation of the working environment.	4	6	Lecture, independent work
	Standard of profession. Scientific degree and qualification	2	4	Lecture, independent work
	New IT business start-up experience, challenges, success	2	6	Lecture, group work, independent work
	Experience in international IT business - success, difficulty, focus.	4	4	Lecture, group work,, independent work

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	Introduction to IT business environment, tasks	10	4	Study tour
	Web page creation. Basic principles. Structures. Language HTML Using tables on web pages, Creating a structured web page	4	6	Lecture, laboratory work, independent work
	Simple algorithm development. Types of signature logging. Flowcharts.	4	6	Lecture, practical work, independent work
	Counting systems,	4	6	Lecture, practical work, independent work
	Finite automat	8	12	Lecture, practical work, independent work
	Turing machine	8	12	Lecture, practical work, independent work
	Basic programming principles, classical programming languages, object-oriented languages, frameworks.	2	6	Lecture, practical work, independent work
	General Internet Structure. Setting up web browsers, use for obtaining and exchanging information in the design of work. Severi, Internet Systems	2	4	Lecture, independent work
	In-depth IT research	2	4	Lecture, independent work
	Individual research work	8	16	Seminar, presentations
	Hours total:	***64***	***96***	