

**RTU Course "Applied Software"**

12308 null

General data

Code	DIP217
Course title	Applied Software
Course status in the programme	Compulsory/Courses of Limited Choice
Course level	Undergraduate Studies
Course type	Academic
Field of study	Computer Science
Responsible instructor	Aleksejs Jurenoks
Academic staff	Jurijs Ivanovs Lāsma Lēruma-Gūtmane
Volume of the course: parts and credits points	1 part, 2.0 Credit Points, 3.0 ECTS credits
Language of instruction	LV, EN
Annotation	The description of the development principles of integrated applications. The application methods and interaction methodologies of different components. The interactions of the text editor, spread sheets, presentation applications and work structuring components as well as software operating automation using macro commands.
Goals and objectives of the course in terms of competences and skills	The aim - to understand and master the basics of automation applications. The tasks involve learning to work with large documents, administered control, checking the elements of information integrity, the basics of software operation automation using macro commands, making the user interface, software interactions, software integrity (data exchange between programs, software tool sharing), the logic of creating the presentation and the order of the information. After the completion of the course the students will have the competence and skills of using the applications in an "advanced" way as well as for the automation of the software operation using scripting languages.
Structure and tasks of independent studies	The teacher presents the theoretical concepts and their practical implementation tools during a lecture. The teacher hands out the next task to the students after each lecture meant for practical implementation; the students start the practical implementation of this task soon after the lecture has ended, during the laboratory work and complete it (if they run out of time in the computer class) independently. In this case the work that was completed independently must be defended during the next laboratory work. The students, who missed the defence, must defend a completed work during the consultation at a particular time (assigned by the teacher).
Recommended literature	1. Marina Uhanova, Programmēšanas valodā VBA un VB.NET, Mācību līdzeklis, RTU Izdevniecība, Rīga 2015 2. A. Jurenoks. Lietojumprogrammatūra. Lekcijas. RTU ORTUS. Lietojumprogrammatūra lekcijas slaidi - Rīga: RTU, 2015. 340 slaidi 3. V. Šitikovs, A. Jurenoks. Lietojumprogrammatūra. Metodiskie materiāli laboratorijas darbu izpildei. RTU ORTUS. Lietojumprogrammatūra multimedija - Rīga: RTU, 2014. 820,26 Mb (8 videoklipi) 4. Bill Jelen, Tracy Syrcstad, VBA and Macros Microsoft Excel 2013, MrExcel Library, ISBN-13: 978-0-7897-4861-4, 2013 5. V. Žemaitis, A. Jurenoks, Microsoft Word no iesācēja līdz lietpratējam, Zvaigzne ABC, ISBN-13:9789984401478, 2008
Course prerequisites	Informatics II (secondary school course) - basics of software applications, basics of MS Office components (MS Word, MS Excel, MS Access, MS PowerPoint).

Course outline

Theme	Hours
Working with large text documents	8
Input data validation in spreadsheets	4
Data auditing in spreadsheets	2
Programming in MS Excel environment, macros, creation of user interface	2
HTML basics and work with HTML-editors	4
Graphical Editors	4
Software interaction, software integrity	4
Logic of presentation creation and sequence of information	4

Learning outcomes and assessment

Learning outcomes	Assessment methods
Knows and understands the content of the course. The student is able to:	To obtain a "pass" it is necessary to execute and defend six practical tasks during the semester.
- Quickly and securely make changes to a large hierarchical MS Word document that contains a lot of intra-and inter-related objects	2 Tasks

- Use MS Excel spreadsheet as a programming tool	2 Tasks
- Create editable graphical objects and add them to other documents	1 task
- Create documents with mutually binding sites	1 task

Study subject structure

Part	CP	Hours per Week			Tests		
		Lectures	Practical	Lab.	Test	Exam	Work
1.	2.0	1.0	0.0	1.0		*	