



COURSE UNIT DESCRIPTION

Course unit title	Course unit code
Programming Windows API	PWAPI

Lecturer	Department where the course unit is delivered
Coordinator: lector dr. Tomas Plankis	Department of Computer Science II Faculty of Mathematics and Informatics Vilnius University

Cycle	Type of the course unit
First	Optional

Mode of delivery	Semester or period when the course unit is delivered	Language of instruction
Face-to-face	5th semester	Lithuanian and English

Prerequisites
Knowledge of C or syntactically similar programming language.

Number of ECTS credits allocated	Student's workload	Contact hours	Individual work
5	126	64	62

Purpose of the course unit: programme competences to be developed		
<p>Generic competences to be developed</p> <ul style="list-style-type: none"> • Knowledge and understanding of the subject area and understanding of the profession (<i>BK2</i>) • Ability to resolve problems (<i>BK4</i>) • Ability to use information and communications technologies (<i>BK5</i>) <p>Subject-specific competences to be developed</p> <ul style="list-style-type: none"> • Ability to apply general methods of the program design, make and analyse software requirements (<i>DK1</i>) • Ability to do program and IT service testing and debugging (<i>DK4</i>) 		
Learning outcomes of the course unit	Teaching and learning methods	Assessment methods
Ability to distinguish specifics of programming in Windows API	Demonstrations, practical tasks, self study	Exercises, test (exam)
Ability to solve tasks in the subject specific area		
Ability to distinguish aspects of user interface development and functioning		
Ability to write programs in the application area using Message Loop Architecture		
Ability to develop software interface		
Ability to debug software applications	Literature analysis, self study	Presentation
Ability to analyse the subject related topic and to present new information to the audience		

Course content: breakdown of the topics	Individual work: time and assignments						Assignments	
	Lectures	Laboratory work (LW)	Seminars	Consultations during LW	Internship/work placement	Contact hours		Individual work
1. Programming in Windows	4	4		5		8	Task #1	
2. Handles and Data Types	2	2				4		2
3. Message Loop Architecture	2	2				4		2
4. Window Creation	2	2				4	2	
5. User Interface Controls	2	2				4	2	Task #2
6. User Interface Management	2	2				4	2	
7. Dialog Boxes	2	2				4	2	Task #3
8. Resource scripts	2	2				4	2	
9. Dynamic Link Libraries	2	2				4	2	
10. GDI and Drawing	2	2				4	2	Task #4
11. Input-Output	2	2				4	2	Task #5
12. Console	2	2				4	2	
13. Registry API	2	2				4	2	
14. Multitasking	2	2				4	2	
15. MDI programs	2	2				4	2	
Presentation Preparation						14		
Preparing for the exams						20		
Total	32	32				64	62	

Assessment strategy	Weight %	Deadline	Assessment criteria
Exercises	40	Appointed time during the semester	5 tasks (10 points each). The final mark is the average of all five assessments. Assessment criteria are: correct functioning (70%), implementation of requirements (20%), defence of the program (10%).
Exam test	40	Session	Test. 10 open and closed questions (0.4 point each)
Presentation	20	Appointed time during the semester	The clear presentation of the chosen topic (80%), fluency (10%), level of coverage and completeness (10%).

Author	Publishing year	Title	Issue No or volume	Publishing house or Internet site
Required reading				
Charles Petzold	1999	Programming Windows, Fifth edition		Faculty of Mathematics and Informatics
Optional reading				
Internet site 1		Reliable Software. Windows API Tutorial		http://www.relisoft.com/win32/index.htm
Internet site 2		Wikibooks. Windows Programming		http://en.wikibooks.org/wiki/Windows_Programming