

<b>Subject code</b>	<b>Credits</b>
INFN1009	6

**Title**

INFORMACIN S TECHNOLOGIJOS IR PROGRAMAVIMO PAGRINDAI

**Title in English**

**FUNDAMENTALS OF COMPUTER PROGRAMMING AND INFORMATION TECHNOLOGIES**

**Subject goal and annotation**

Course introduces main concepts of computer science and information technologies. Students are going to learn about computer hardware and software, computer networks, data communications, basics of internet technologies. Concepts of algorithms, using of applied programs and purpose of programming languages are explained. Students will understand the Content Management Systems, and will use it in practice to make quickly a simple, but with modern technologies and functionalities equipped web page. They will be willing to understand purpose of technologies, and possibilities to use them in practice.

**Prerequisites**

No prerequisite.

**Relationship between the learning outcomes of the Programme and learning outcomes of the subject**

<b>Learning outcomes of the Programme</b>	<b>Learning outcomes of the subject</b>	<b>Criteria for measuring the achievement of learning outcomes</b>
3. Knowledge of basic and advanced computer science and its application.  10. Analysis, design and development of advanced Internet systems.	Knowledge and understanding of computer structure.  Choose and apply software to solve practical problems.	Student demonstrates the ability to explain processes going in computers.  The ability to use received knowledge in other university courses.  Student demonstrates skills in word processing, spread sheet, database, graphical software applications, internet technology.  Students presents the practical works to lecture and their colleagues
7. Formalization and specification of real-world problems, and ability to describe them at an abstract level	Describing problems and solutions in abstract manner.	Student demonstrates ability to describe problem, and then solving it, and describing solution in a formal manner (CMS Web pages solutions)

**Subject content**

	<b>Lecture topics and contents</b>	<b>Hours</b>
1.	Informatics science conceptions. Computer generations.	3
2.	Computer system structure: hardware and software.	12
3.	Hardware: inside and outside.	6

4.	Software: Operating systems..	3
5.	Text processors, Spread sheets, Databases.	15
6.	Multimedia.	3
7.	Communications, Internet.	3
	<b>Total</b>	<b>45</b>

#### Practical work contents

Four practical problems. Each of them should be presented and described.

1. Creating a simple Web page, with modern functionalities, using WordPress CMS.
2. Practical works with word processing, spreadsheets, database, and graphical software applications.

#### Evaluation of study results

Final written exam (50%), mid-term written exam (17%), and assessments of laboratory (practical) work (33%).

#### Distribution of subject study hours

Lectures	45
Laboratory	30
Individual studies (including studies in groups, preparation for the mid-term and final exams)	105
<b>Total</b>	<b>180</b>

#### Recommended literature

No	Authors of publication and title	Number of copies available		
		<i>in the Library of VMU</i>	<i>in specialized publication collections at VMU</i>	<i>in other libraries</i>
<b>Basic materials</b>				
1.	Long L., Long N., Computers: Information Technology in Perspective. Prentice Hall, 2002		1	1
2.	Behrooz Parhami. Computer architecture: From Microprocessors to Supercomputers. Oxford University Press, 2005		1	
3.	Davis W. S., Rajkumar T., Operating Systems: A Systematic View. Addison Wesley, 2001		1	1
<b>Supplementary materials</b>				
1.	Janickien D., Informatika. VDU, 2005	100		
2.	D.Janickien , R.Valteryt , V.Statkevi ien , R. Mar iulynien . Informatics. (electronic version, texbook)	1		
3.	Stephanie Leary. sBeginning WordPress%o ISBN:978-1-4302-2895-0. 2010.		Available on internet free of charge. <a href="http://it-ebooks.info/book/463">http://it-ebooks.info/book/463</a>	
4.	Stephanie Leary. WordPress for Web Developers. 2013. 978-1-4302-5866-7.		Available on internet free of charge. <a href="http://it-ebooks.info/book/2678">http://it-ebooks.info/book/2678</a>	

#### Subject prepared and coordinated by

Doc. Dr. Danguol Janickien , Vytautas Barzdaitis