

<b>Subject code</b>	<b>Credits</b>
INF3002	6

**Title**

INTERNETO TECHNOLOGIJOS

**Title in English**

INTERNET TECHNOLOGIES

**Subject goal and annotation**

The course will give an overview of the variety of modern technologies used for design of internet page. During the course student will gain knowledge on the history of internet, web architecture, web protocols, client-server architecture, loadbalancers, search engine optimisation techniques, monitoring and testing of the internet pages, implementation of responsive design and programming techniques. The course structure consists of lectures, laboratory works in computer classroom, as well as individual work.

**Prerequisites**

Fundamentals of programming; Operating systems, Data bases

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

Learning outcomes of the Programme	Learning outcomes of the subject	Criteria for measuring the achievement of learning outcomes
3. Knowledge of basic and advanced computer science and its application.	Knowledge and understanding of the basics of internet techniques, principles of operations: software, hardware, communications	Student demonstrates the ability to describe and analyse provided him tasks.
6. Knowledge of Internet and multimedia products development, their commercial and social impact.	Choose and apply suitable tools, interpret the results	Student demonstrates skills in developing systems and applying the tools
7. Formalization and specification of real-world problems, and ability to describe them at an abstract level  8. Perform interdisciplinary research and development in Internet systems area, apply results in practical applications.  10. Analysis, design and development of advanced Internet systems.  12. Analysis, design and development of diverse software systems.	Establish database connectivity in internet pages, implementing SEO. Provide knowledge on internet programming principles, developing interactive web apps, using data bases. Understanding the importance of security	Ability to organize data synchronization. Combine security techniques. Modelling, testing and analysing modern WEB systems. Adjusting for responsive design possibilities.  Ability to distinguish the programming languages and compound technologies.

**Subject content**

	Lecture topics and contents	Hours
1.	Thing to remember in internet for developers. Hosting, DNS, services. Project	3

	roadmap.	
2.	Cloud computing techniques: for user and for developer.	3
3.	Responsibility of Frontend developer. Technologies such as HTML CSS. JavaScript explained.	9
4.	PHP from scratch. Internal and external scripts, the syntax, handling strings, Cookies, Sessions.	9
5.	PHP with data bases. Connecting to the database. Programming web interface to a database. Access and update the records.	12
6.	Testing web pages. Cross browser/platform compatibility.	3
7.	Responsive design.	3
8.	More on security technologies and techniques.	3
	<b>Total</b>	<b>45</b>

#### Practical work contents

Three practical problems. The one practical project will be produced, if succeeded.

1. Evaluate requirements of the project. Making systemsqprototype.
2. Frontend developing.
3. Developing backend of the project.

#### 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 work	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.	A.Vid0i nas, D.Vitkut s interneto paslaugos ir svetaini k rimas%a2009.	4	3	
2.	V. Barzdaitis, A.Vid0i nas. %a interneto svetaini ir tinklalapi k rimas . 2005.	5	10	
<b>Supplementary materials</b>				
1.	Web Hosting. Begining for HTML, CSS, PHP.	Available free on internet: <a href="http://www.tizag.com">http://www.tizag.com</a>		
2.	HTML5: HTML5 Quick Learning Guide.	Available free on internet: <a href="http://freehtml5templates.com/html5-quick-learning-guide/">http://freehtml5templates.com/html5-quick-learning-guide/</a>		
3.	Kevin Tatroe, Peter MacIntyre, Rasmus Lerdorf. Programming PHP, 3rd Edition. ISBN 978-1-4493-9277-2, O'Reilly Media, 2013.	Available free on internet: <a href="http://it-ebooks.info/book/1857">http://it-ebooks.info/book/1857</a>		

#### Subject prepared and coordinated by

Lect. Vytautas Barzdaitis