Study program: Modern computer technologies

Course title: Internet technologies

Professor/assistant: Zoran Veličković / Slavimir Stošović

Type of course: compulsory

ECTS credits: 7

Pre-requisites: none

Aims of the course:
Preparing students to:
- Learn basic concepts related to the Internet such as Internet services and protocols, HTML language, HTTP protocol, the structure and design of the website, Site object, JavaScript, CSS, XML, MySQL, CGI;
- Explore the HTML computer language for describing web pages, automate procedures on the website and Techniques separation of content from layout;
- Learn to solve practical problems in the field of design and automation of procedures on the website.

Learning outcomes:
It is expected that students after passing the exam can:
- Analyze, optimize and implement dynamic web pages;
- Using standard design and programming techniques for the implementation of dynamic web pages;
- Comparing and analyzing the characteristics of Web sites;
- Distinguish and analyze the details of the base architecture of the website;
- Detect problems in the implementation and propose a suitable solution

Syllabus
Theoretical part:
Internet - a global computer network. The client - server technology. Static and dynamic Websites. Service on the Internet and TCP - IP protocols. HTML computer language for hypertext links. HTTP protocols. Paired tags and attributes HTML document. Sections, fonts, images, lists, and HTML document. HTML tables. HTML form elements. Send results form the server. Automate processes in a web page: JavaScript functions, event processing and transmission parameters. Java applets and ActiveX objects on Web page. The separation of data structure from presentation. Cascading Style Sheets CSS. The formation rules. Metadata, XML, XHTML and media type. Programming on the client/server. PHP/CGI scripts. Databases on the Internet MySQL.
Practical part:
Formatting Web pages and content of an HTML document. Making Websites with frames. Arranging data in a Web table. Schedule HTML objects on the Web page. Making an application form with the necessary elements. Installing an applet on the Web page. Associated rules and cascading stylesheets. Forming a simple server script. Updating data in a MySQL database.

Literature
1. J. D. Gauchat, HTML5 for Masterminds, second edition, J. D. Gauchat, 2014.
2. W. Willard, Web Design: A Beginner's Guide, McGraws-Hill/Osborne, 2010.
3. Z. Veličković, S. Stošović, Internet technologies: Practicum laboratory exercises, Niš, 2018.

Number of active classes			Other forms of teaching:
Lectures: 30	Practical classes: 30	Research work:	

Teaching methods
Combination of interactive approach with practical problems solving.

Grading system (maximum 100 points), **grading scale** from 5 to 10: below 51 points grade 5, grade 6 from 51-60 points, grade 7 from 61-70 points, grade 8 from 71-80 points, grade 9 from 81-90 points, grade 10 from 91-100 points.

Pre-exam obligations	**points**	**Final exam**	**points**
activity during theoretical lectures	**10**	written exam	**15**
practical training	**20**	oral exam	**15**
colloquium(s)/seminar papers	**40**		
Sum	**70**	**Sum**	