

<b>Study program: Information Technologies, Computing and Software Engineering</b>		
<b>Course title: WEB TECHNOLOGIES</b>		
<b>Teacher(s): Milosevic G. Danijela, Stefanovic D. Nenad</b>		
<b>Course status: Mandatory (IT), Elective (CSE)</b>		
<b>Number of ECTS credits: 6</b>		
<b>Condition: none</b>		
<b>Course objectives</b> Getting to know and master the basics and advanced Internet and web concepts, technologies, services and tools, as well as client web techniques and technologies.		
<b>Learning outcomes</b> Students will acquire the necessary knowledge in the fields of WWW, Internet architecture, services and networking, as well as web design for standard and mobile platforms. Students will master the use of the latest client web technologies related to HTML, JavaScript, JavaScript libraries and frameworks, as well as XML. Students will be able to use the acquired knowledge in various jobs (Internet networking, web design, front-end web programming, cloud computing, consulting jobs, web marketing, etc.).		
<b>Summary of topics</b> <i>Theoretical classes</i> The course will cover the following topics: Introduction to the Internet; Basic concepts and concepts of the WWW; Internet networking; OSI model; TCP/IP model; protocols and standards; quality of service; routing; cloud computing; concepts and approaches to web design; search engine optimization (SEO), web project management, HTML5 and CSS3 (standards and related technologies); JavaScript and AJAX - basics and applications in web design, JavaScript libraries and frameworks (jQuery, Angular, Bootstrap, etc.), XML (standards and technologies), JSON, web services (standards, protocols and technologies), cloud computing services. <i>Practical teaching</i> Tools and techniques for managing web projects, web design, HTML5, CSS3, HTML APIs, JavaScript, jQuery, Bootstrap, Angular, React, XML and JSON. Development environments for creating websites, applications, and DevOps (GitHub, Azure DevOps). Creating a project assignment on a given topic and using various web technologies.		
<b>Recommended literature</b> [1] Svekis, Laurence Lars: JavaScript od početnika do profesionalca, Beograd, 2022. [2] N. Kojic, Web dizajn: HTML, CSS i JavaScript, Univerzitet Singidunum, Beograd, 2020. [3] M. Veinović and A. Jevremović, Internet tehnologije, Univerzitet Singidunum, 2020. [4] Ackermann, Philip. JavaScript: The Comprehensive Guide. Немачка, Rheinwerk Publishing, 2022. [5] Nixon, Robin. HTML5 and CSS3 Masterclass: In-depth Web Design Training with Geolocation, the HTML5 Canvas, 2D and 3D CSS Transformations, Flexbox, CSS Grid, and More (English Edition). Индија, BPB Publications, 2022. [6] Tatnall, Arthur. Web Technologies: Concepts, Methodologies, Tools, and Applications. Information Science Reference, 2010. [7] Отворени образовни ресурси - edx.org, coursera.org, w3schools.com, 2023.		
<b>Number of active classes: 4</b>	<b>Theoretical classes: 2</b>	<b>Practical teaching: 2</b>
<b>Teaching methods</b> Lectures and exercises in a computer classroom equipped with video beam, computers, and Internet access. Combination of classical teaching with e-learning and appropriate literature. Interactive teaching with multimedia content. Problem-oriented teaching, practical teaching, independent student work - homework and project tasks. Use of the latest web platforms (Microsoft 365) in teaching, communication, teamwork, application development and collaboration. Regular and on-demand consultations both in person and via video conferencing platform.		
<b>Evaluation (maximum number of points 100)</b>		

<b>Exam prerequisites:</b>	No. of points:	<b>Final exam:</b>	No. of points:
Activities during teaching process	<b>4</b>	Final exam (written):	<b>30</b>
Tests	<b>46 (23+23)</b>	Final exam (oral):	<b>20</b>