



## Subject card

Subject name and code	Development of Web Applications, PG_00047641						
Field of study	Informatics						
Date of commencement of studies	October 2024		Academic year of realisation of subject		2024/2025		
Education level	first-cycle studies		Subject group		Obligatory subject group in the field of study		
Mode of study	Full-time studies		Mode of delivery		at the university		
Year of study	1		Language of instruction		Polish		
Semester of study	1		ECTS credits		4.0		
Learning profile	general academic profile		Assessment form		exam		
Conducting unit	Department of Computer Architecture -> Faculty of Electronics, Telecommunications and Informatics						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Tomasz Dziubich				
	Teachers		mgr inż. Krystyna Dziubich				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	15.0	0.0	30
	E-learning hours included: 0.0						
Learning activity and number of study hours	Learning activity	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	Number of study hours	30		20.0		50.0	100
Subject objectives	Understanding the mechanisms and tools for developing web applications						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[K6_U09] can carry out a critical analysis of the functioning of existing technical solutions and assess these solutions, as well as apply experience related to the maintenance of technical systems, devices and facilities typical for the field of studies, gained in the professional engineering environment	The student is able to verify the correctness of the HTML and CSS code and assess the correctness of the execution of the JS code in the web browser	[SU4] Assessment of ability to use methods and tools
	[K6_W44] knows and understands, to an advanced extent, architecture, design principles and methods of hardware and software support for local and distributed information systems, including computing systems, databases, computer networks and information applications, as well as the principles of human-computer interaction, the operation and evaluation criteria of data processing, storage and transfer methods, including computational algorithms, artificial intelligence and data mining as well as standards and methods of IT systems administration, monitoring of processes and robustness to undesirable phenomena and activities	The student uses the development environment and developer tools available in web browsers to trace HTTP/HTTPS communication occurring between the client side and the application server, taking into account human interaction with the web browser.	[SW3] Assessment of knowledge contained in written work and projects
	[K6_U08] while identifying and formulating specifications of engineering tasks related to the field of study and solving these tasks, can:n- apply analytical, simulation and experimental methods,n- notice their systemic and non-technical aspects,n- make a preliminary economic assessment of suggested solutions and engineering work n	The student uses the development environment to create, test and design a project task; The student uses the production environment to launch and present the final form of the project task.	[SU1] Assessment of task fulfilment
	[K6_W03] knows and understands, to an advanced extent, the construction and operating principles of components and systems related to the field of study, including theories, methods and complex relationships between them and selected specific issues - appropriate for the curriculum	The student uses knowledge in the field of digital documents, basics of programming and network communication. He knows the rules of operation and processing of scripts on the client's side as well as on the server side.	[SW1] Assessment of factual knowledge
Subject contents	1. Internet protocols, Internet architecture (DNS servers; protocols: HTTP , URI, URL, URN);  2. The client side - browser (JavaScript, DOM, jQuery);  3. Server side (PHP, handling of HTTP requests, MongoDB as an example of a database, session mechanism, introduction to access control issues, MVC pattern);		
Prerequisites and co-requisites	Basic HTML and CSS		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Exam	50.0%	50.0%
	Project	50.0%	50.0%
Recommended reading	Basic literature	L. Shklar, R. Rosen: Web Application Architecture: Principles, Protocols and Practices, 2nd ed., Wiley, 2009	
	Supplementary literature	No requirements	
	eResources addresses	Adresy na platformie eNauczanie: Wytwarzanie aplikacji internetowych 2024/25 OK - Moodle ID: 40571 <a href="https://enauczanie.pg.edu.pl/moodle/course/view.php?id=40571">https://enauczanie.pg.edu.pl/moodle/course/view.php?id=40571</a>	

Example issues/ example questions/ tasks being completed	<p>HTTP protocol in use (Requests Headers and Response Headers);</p> <p>JavaScript, jQuery);</p> <p>Simple Web Application in PHP;</p>
Work placement	Not applicable

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