



## Subject card

Subject name and code	Development of Web Applications, PG_00047641						
Field of study	Informatics						
Date of commencement of studies	October 2021	Academic year of realisation of subject			2021/2022		
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	mgr inż. Krystyna Dziubich					
	Teachers	mgr inż. Krystyna Dziubich mgr inż. Robert Kałaska					
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						
	Adresy na platformie eNauczanie: Wytwarzanie Aplikacji Internetowych - Aktualny - Moodle ID: 14354 <a href="https://enauczanie.pg.edu.pl/moodle/course/view.php?id=14354">https://enauczanie.pg.edu.pl/moodle/course/view.php?id=14354</a>						
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_U42] can apply tools and methods of designing, optimization, monitoring, management, increasing reliability and protection from safety hazards in local and distributed information systems and applications	The student knows and can apply the Front Controller design templates, MVC, routing tables. He understands the concept of data sanitization;	[SU1] Assessment of task fulfilment
	[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_U43] can analyse data and formulate, apply and assess appropriate formal models and algorithms for solving problems in the field of information systems and applications	Student is able to choose the right architecture of the web solution depending on the needs	[SU1] Assessment of task fulfilment
	[K6_W41] Knows and understands, to an advanced extent, the operation and evaluation criteria of data processing, storage and transfer methods, including computational algorithms, artificial intelligence and data mining	The student understands: HTTP communication support (POST and GET transmission); script-side processing of the server, preserving the data in the database; General information about the site and keeping them in WebStorage.	[SW1] Assessment of factual knowledge
[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	<p>1. Internet protocols, Internet architecture (DNS servers; protocols: HTTP , HTTPS, HTTP / 2; URI, URL, URN);</p> <p>2. The client side - browser (javaScript, DOM, jQuery, Responsive Web Design);</p> <p>3. Server side (PHP, handling of HTTP requests, MongoDB as an example of a database, session mechanism, introduction to access control issues, MVC pattern);</p>		
Prerequisites and co-requisites	No requirements		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Project	50.0%	50.0%
	Written exam	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	Wytwarzanie Aplikacji Internetowych - Aktualny - Moodle ID: 14354 <a href="https://enauczanie.pg.edu.pl/moodle/course/view.php?id=14354">https://enauczanie.pg.edu.pl/moodle/course/view.php?id=14354</a>	
Example issues/ example questions/ tasks being completed	<p>HTTP protocol in use (Requests Headers and Response Headers);</p> <p>Responsive Web Page (HTML, JavaScript, jQuery);</p> <p>Simple Web Application in PHP;</p>		
Work placement	Not applicable		