GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Internet Technologies in Mobile Applications, PG_00048058
Field of study	Informatics, Biomedical Engineering

Date of commencement of studies	February 2026	Academic year of realisation of subject	2026/2027
Education level	second-cycle studies	Subject group	Optional subject group / Specialty subject group / Subject group related to scientific research 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	2	ECTS credits	2.0
Learning profile	general academic profile	Assessment form	assessment

Conducting unit	Department Of Computer Communications -> Faculty Of Electronics Telecommunications And Informatics -> Wydziały Politechniki Gdańskiej

Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Wojciech Gumiński
	Teachers	dr inż. Wojciech Gumiński

Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	15.0	0.0	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	4.0	16.0	50

Subject objectives	The main objective of the course is to provide students with the web technologies and proper use of web technologies..

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[K7_U04] can apply knowledge of programming methods and techniques as well as select and apply appropriate programming methods and tools in computer software development or programming devices or controllers using microprocessors or programmable elements or systems specific to the field of study, making assessment and critical analysis of the prepared software as well as a synthesis and creative interpretation of information presented with it	Student selects the right internet technologies. Student applies Internet standards.	[SU1] Assessment of task fulfilment [SU4] Assessment of ability to use methods and tools
	[K7_W04] knows and understands, to an increased extent, the principles, methods and techniques of programming and the principles of computer software development or programming devices or controllers using microprocessors or other elements or programmable devices specific to the field of study, and organization of work of systems using computers or such devices	Student develops implementations of internet technology mechanisms.	[SW1] Assessment of factual knowledge
	[K7_W04] knows and understands, to an increased extent, the principles, methods and techniques of programming and the principles of computer software development or programming devices or controllers using microprocessors or other elements or programmable devices specific to the field of study, and organization of work of systems using computers or such devices	Student develops implementations of internet technology mechanisms.	[SW1] Assessment of factual knowledge
	[K7_W04] knows and understands, to an increased extent, the principles, methods and techniques of programming and the principles of computer software development or programming devices or controllers using microprocessors or other elements or programmable devices specific to the field of study, and organization of work of systems using computers or such devices	Student develops implementations of internet technology mechanisms.	[SW1] Assessment of factual knowledge
	[K7_W10] knows and understands, to an increased extent, the basic processes occurring in the life cycle of equipment, objects and technical systems, as well as methods of supporting processes and functions, specific to the field of study	Student lists the most popular software libraries for creating web applications.	[SW1] Assessment of factual knowledge
	[K7_U08] while identifying and formulating engineering tasks specifications and solving these tasks, can: - apply analytical, simulation and experimental methods, - notice their systemic and non-technical aspects, - make a preliminary economic assessment of suggested solutions and engineering work	Student selects authentication mechanisms.	[SU4] Assessment of ability to use methods and tools [SU1] Assessment of task fulfilment
Subject contents	1. Standards and specifications in Internet programming. XHTML and XML. 2. Internet application - activity monitoring of servers, workstations and network hardware. 3. Concentration and dispersion of network flow: many servers one IP address - virtual HTTP servers. 4. Concentration and dispersion of network flow: one domain many IP addresses - DNS configuration. 5. Web caching proxy servers - Internet connection load control. 6. Web caching proxy servers - Internet access control. 7. Web caching - server load limiting. 8. Web switching basics. 9. Web switching - switching in layer 7. 10. User authorization with challenge response exchange. 11. Internet transactions security basics.		

Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Test	50.0%	35.0%
	Practical exercise	50.0%	65.0%
Recommended reading	Basic literature	Lecture notes	
	Supplementary literature	Coggeschall J., PHP5 Księga eksperta, Helion 2005. w3c.org jquery.com getbootstrap.com angularjs.org w3schools.com	
	eResources addresses	Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed	Web application implementation using Bootstrap and JQuery frameworks. Implementation of a multi-layered web application using the AngularJS frameworks. Web service implementation.		
Work placement	Not applicable		

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