GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Networked Mobile Technologies, PG_00063916
Field of study	Sieciowe technologie mobilne

Date of commencement of studies	February 2025	Academic year of realisation of subject	2025/2026
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	exam

Conducting unit	Department of Geoinformatics -> Faculty of Electronics Telecommunications and Informatics -> Wydziały Politechniki Gdańskiej

Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Marcin Kulawiak
	Teachers	dr hab. inż. Marcin Kulawiak
		dr inż. Marek Kulawiak

Lesson types	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						
	eNauczanie source address: https://enauczanie.pg.edu.pl/moodle/course/view.php?id=33425						
	Moodle ID: 33425 Sieciowe Technologie Mobilne https://enauczanie.pg.edu.pl/moodle/course/view.php?id=33425						

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 aim is to develop a computer engineer who has knowledge and skills in communication techniques used in devices mobilnych.Jest prepared to work effectively in development teams in IT companies and ICT as well as in education, where their knowledge and skills will be used with the principles of legal and ethical awareness, and the social problems of computerization.

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[K7_U12] is able, to an increased extent, to analyze the operation of components and systems related to the field of study, as well as to measure their parameters and study their technical characteristics, and to plan and carry out experiments related to the field of study, including computer simulations, interpret the obtained results and draw conclusions	The student is can create an Android application which implements network communication using selected mobile protocols.	[SU4] Ocena umiejętności korzystania z metod i narzędzi
	[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	The student knows and understands the current and historical operation rules of network solutions dedicated to mobile devices.	[SW3] Ocena wiedzy zawartej w opracowaniu tekstowym i projektowym
	[K7_W03] knows and understands, to an increased 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 knows and understands the structure and principles of mobile applications which use wireless communication.	[SW1] Ocena wiedzy faktograficznej

Subject contents	GSM network architecture Aspects of handling bluetooth connections in mobile devices Aspects of handling HTTP and HTTPS connections in mobile devices Connections using sockets on mobile devices Other standards for wireless connections used in mobile devices Calling network services on mobile devices Introduction to mobile websites Programming web applications for mobile devices Cloud computing in a mobile environment Other available network solutions for mobile platforms

Prerequisites and co-requisites	Basics of Java, C++ and Javascript programming.

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Laboratory	60.0%	50.0%
	Lecture	60.0%	50.0%

Recommended reading	Basic literature	Android Programming Guide IOS and iPhone Programming
	Supplementary literature	TCP/IP. Experts book.Ed II Autorzy: Karanjit S. Siyan, Tim Parker
	eResources addresses	

Example issues/ example questions/ tasks being completed	Creating a mobile application that uses Wi-Fi communication Creating a mobile application using the Bluetooth

Practical activites within the subject	Not applicable

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