GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Networked Mobile Technologies, PG_00047765		
Field of study	Informatics		
Date of commencement of studies	October 2025	Academic year of realisation of subject	2026/2027
Education level	second-cycle studies	Subject group	Optional subject group Subject group related to scientific research in the field of study
Mode of study	Part-time studies	Mode of delivery	at the university
Year of study	2	Language of instruction	Polish
Semester of study	3	ECTS credits	4.0
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	

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	18.0	0.0	0.0	15.0	0.0	33

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	33	10.0	57.0	100

Subject objectives

The students will learn about web technologies used in mobile systems. The technologies involve Bluetooth, WiFi, GSM/GPRS, 3G, 4G etc.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K7_W08] knows and understands, to an increased extent, the fundamental dilemmas of modern civilisation, the main development trends of scientific disciplines relevant to the field of education	The student knows and understands the principles of wireless communication on mobile devices.	[SW1] Assessment of factual knowledge
[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 the principles of wireless communication methods on mobile devices.	[SW1] Assessment of factual knowledge

Subject contents

1. GSM network architecture 2. Aspects of handling bluetooth connections in mobile devices 3. Aspects NFC connection handling in mobile devices 4. Connections using sockets on mobile devices 5. Other standards of wireless connections on mobile devices 6. Using Web services on mobile devices 7. Programming web applications for mobile devices 8. Architecture of Web services created in JEE. 9. Elements of HTML5 in the context of mobile devices. 10. Other available network solutions for mobile platforms.

Prerequisites and co-requisites

No requirements

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Project	60.0%	50.0%
Written exam	60.0%	50.0%

Recommended reading	Basic literature	Creating a Web service with JEE and NetBeans http://netbeans.org/kb/docs/websvc/jax-ws.html Creating an Android Web service client with ksoap2 http://www.ibm.com/developerworks/webservices/library/ws-android/index.html Android application development http://developer.android.com/guide/components/index.html
	Supplementary literature	The J2EE Tutorial by Eric Armstrong, Jennifer Ball, Stephanie Bodoff,Debbie Bode Carson, Ian Evans Dale, Green Kim Haase, Eric Jendrock
	eResources addresses	
Example issues/ example questions/ tasks being completed	Creating a Web service for mobile devices. Describing the evolution of packet communication standards on mobile devices.	
Work placement	Not applicable	

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