GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Wireless Technology, PG_00047922		
Field of study	Electronics and Telecommunications		
Date of commencement of studies	October 2025	Academic year of realisation of subject	2026/2027
Education level	first-cycle studies	Subject group	Obligatory subject group in the field of study 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	2	Language of instruction	Polish
Semester of study	4	ECTS credits	3.0
Learning profile	general academic profile	Assessment form	exam
Conducting unit	Department Of Radiocommunication Systems And Networks -> Faculty Of Electronics Telecommunications And Informatics -> Wydziały Politechniki Gdańskiej		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Krzysztof Cwalina	
	Teachers	dr inż. Krzysztof Cwalina	

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	3.0	42.0	75

Subject objectives

Radio link structure and operation, typical applications

Learning outcomes

Course outcome	Subject outcome	Method of verification

Subject contents

1 Radio-link structure, transmitter and receiver parts, wireless part 2 Base phenomenas in wireless medium, radio communication equation 3 Antenna interface, base parameters 4 Transmitter technique principles, the transmitter technique 5 Receiver technique principles, the receiver technique 6 IF part of receiver 7 Transreceive station 8 HF part of radio station 9 Analog and digital modulation methods 10 Radio modem technique, radio network structure 11 Radio access methods, FDMA, TDMA, CDMA, SDMA 12 Wireless telecommunication link, radio link, practical aspects 13 Cellular telephone concepts 14 Telecommunication satellite, global telecommunications 15 Wireless systems and techniques, development trends

Prerequisites and co-requisites

No requirements

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Written exam	50.0%	70.0%
Practical exercise	50.0%	30.0%

Recommended reading

Basic literature	Katulski R.J.: Propagacja fal radiowych w telekomunikacji bezprzewodowej, WKŁ, 2009
Supplementary literature	No requirements
eResources addresses	Adresy na platformie eNauczanie:

Example issues/ example questions/ tasks being completed

Structure and operation of transmitter and receiver equipments

Work placement

Not applicable

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