GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Monographic Lectures of Wireless Technologies, PG_00048671		
Field of study	Electronics and Telecommunications		
Date of commencement of studies	February 2027	Academic year of realisation of subject	2027/2028
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	2	Language of instruction	Polish
Semester of study	3	ECTS credits	2.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Microwave and Antenna Engineering -> Faculty of Electronics Telecommunications and Informatics -> Faculties of Gdańsk University of Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	prof. dr hab. inż. Michał Mrozowski	
	Teachers	prof. dr hab. inż. Michał Mrozowski	

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	0.0	0.0	0.0	0.0	15

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	15	2.0	33.0	50

Subject objectives

The aim of the course is to familiarize students with various aspects of the use and deployment of wireless technologies and electronic devices used in these technologies.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[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 problems associated with the implementation of microwave filters in available technologies	[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	A student is aware of the problems related to numerical modeling of microwave filters and methods of their implementation in the available tools for their professional design	[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	Knows the theory of microwave filters, and their mathematical and circuit models.	[SW1] Assessment of factual knowledge

Subject contents

Course content – lecture

Lecture whose contents varies each year - lectures may be delivered by invited speakers (including foreign), practitioners from industry - the course can be monothematic, delivered by one lecturer or divided into blocks (delivered by several lecturers)

- Module 0: Introduction to Microwave Filters

- Module I: Basic Definitions and Responses

- Module II: Basic Synthesis Techniques- Module III: Impedance Scaling and Frequency Mappings- Module IV: Microwave Resonators: Basic Technology Options- Module V: Transmission-Line-Based Bandpass Filter Design- Module VI: Introduction to Signal-Interference Filtering

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Participation	66.0%	50.0%
Final test	50.0%	50.0%

Recommended reading

Basic literature	Students are given handouts prepared by the lecturer
Supplementary literature	Not defined
eResources addresses	

Example issues/ example questions/ tasks being completed

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Practical activites within the subject

Not applicable

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