



## Subject card

Subject name and code	Reception of Radio Signals II, PG_00047456						
Field of study	Electronics and Telecommunications						
Date of commencement of studies	October 2022		Academic year of realisation of subject		2023/2024		
Education level	second-cycle studies		Subject group		Optional 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		English		
Semester of study	3		ECTS credits		1.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Department of Radiocommunication Systems and Networks -> Faculty of Electronics, Telecommunications and Informatics						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Małgorzata Gajewska				
	Teachers		dr inż. Andrzej Marczak  dr inż. Małgorzata Gajewska				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	15.0	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		8.0	25
Subject objectives	Acquainted with theory of digital radio receipt.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[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.		Student knows and understands in greater depth the structure and principles of operation of components and systems related to the field of study, including theories, methods and complex relationships between them, as well as selected specific issues - specific to the curriculum.		[SW1] Assessment of factual knowledge		
	[K7_U06] can analyse the operation of components, circuits and systems related to the field of study; measure their parameters; examine technical specifications; interpret obtained results and draw conclusions		Student is able to analyze the operation of elements, systems and systems related to the field of study and measure their parameters and examine technical characteristics, interpret the results obtained and draw conclusions.		[SU4] Assessment of ability to use methods and tools [SU3] Assessment of ability to use knowledge gained from the subject [SU2] Assessment of ability to analyse information [SU1] Assessment of task fulfilment		
Subject contents	1. Measurements of sensitivity and selectivity in a paging system receiver 2. Measurements of noise figure in FM receiver 3. Measurements of signal performance in satellite system 4. Measurements of receiver filter characteristics with the use of vector network analyzer 5. Measurements of spectrum and parameters of phase modulated signals 6. Measurement of signals in UMTS						
Prerequisites and co-requisites							
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	Practical exercise		50.0%		90.0%		
	Activity		0.0%		10.0%		

Recommended reading	Basic literature	<ol style="list-style-type: none"> <li>1. Tomasi W., Advanced Electronic Communications Systems, Prentice Hall, 1992.</li> <li>2. Mitola J., Software Radio Architecture, John Wiley &amp; Sons, 2000.</li> <li>3. Schaub K. B., Kelly J., Production Testing of RF and System-on-a-Chip Device for Wireless Communications, Artech House, 2004.</li> <li>4. Proakis J. G., Digital Communications, McGraw-Hill, 1989.</li> </ol>
	Supplementary literature	No requirements
	eResources addresses	Adresy na platformie eNauczanie: Radio reception signals II 2023/2024 - Moodle ID: 33154 <a href="https://enauczanie.pg.edu.pl/moodle/course/view.php?id=33154">https://enauczanie.pg.edu.pl/moodle/course/view.php?id=33154</a>
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	