



Subject card

Subject name and code	Circuits and Signals - laboratory, PG_00047566						
Field of study	Automatic Control, Cybernetics and Robotics						
Date of commencement of studies	October 2026	Academic year of realisation of subject				2027/2028	
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	3	ECTS credits				1.0	
Learning profile	general academic profile	Assessment form				assessment	
Conducting unit	Department of Signals and Systems -> Faculty of Electronics Telecommunications and Informatics -> Faculties of Gdańsk University of Technology						
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Jan Schmidt					
	Teachers	dr inż. Jan Schmidt					
Lesson types	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	1.0		9.0	25	
Subject objectives	Equipping a student with knowledge and skills acquired in studying the basics of analogue circuits and signals. The knowledge is sought to be useful in further professional studies and practice.						
Learning outcomes	Course outcome		Subject outcome			Method of verification	
	[K6_W04] knows and understands, to an advanced extent, the principles, methods and techniques of programming and the principles of computer software development or programming devices or controllers using microprocessors or programmable elements or systems specific to the field of study, and organisation of systems using computers or such devices		Student - designs simple systems (dividers, attenuators, filters, inverting and non-inverting amplifiers, etc.), - linearizes non-linear elements, - uses computer programs for circuit analysis and design			[SW3] Assessment of knowledge contained in written work and projects [SW1] Assessment of factual knowledge	
Subject contents	Course content – laboratory Periodic signal spectrum. Spectrum modification by passing a periodic signal through a linear and nonlinear circuit. Transmission long delay-line. Attenuator. Resonant circuit. Nonlinear circuit. Passive lowpass Butterworth, Chebyshev and Bessel filters, and active filters. Time-domain and frequency domain characteristics.						
Prerequisites and co-requisites	No requirements						
Assessment methods and criteria	Subject passing criteria		Passing threshold			Percentage of the final grade	
	Midterm short tests		51.0%			40.0%	
	Reports		51.0%			60.0%	
Recommended reading	Basic literature		J. Osowski i J. Szabat: Podstawy teorii obwodów, tomy I-III. WNT Warszawa 1993 (tom I i tom II) i 1995 (tom III) i wydania kolejne.				
	Supplementary literature		No requirements				
	eResources addresses						

Example issues/ example questions/ tasks being completed	
Practical activities within the subject	Not applicable

Document generated electronically. Does not require a seal or signature.