



Subject card

Subject name and code	Metrology II, PG_00038094						
Field of study	Automation, Robotics and Control Systems						
Date of commencement of studies	October 2026	Academic year of realisation of subject			2027/2028		
Education level	first-cycle studies	Subject group					
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			3.0		
Learning profile	general academic profile	Assessment form			assessment		
Conducting unit	Partment of Metrology and Information Systems -> Faculty of Electrical and Control Engineering -> Faculties of Gdańsk University of Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Marek Wołoszyk				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	30.0	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		2.0		43.0	75
Subject objectives	Introduce students with the methods and tools for measuring electrical quantities						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_W03] has structured knowledge of tools and methods for measuring electrical quantities, documenting their results and assessing errors and uncertainties						
	[K6_U02] can work individually and in a team, can communicate using various techniques in a professional environment, as well as document and analyze the results of their work, can estimate the time needed to perform the entrusted task can prepare and present a presentation on the problems and results of an engineering task						
	[K6_K02] can work in a group taking on different roles in it						
Subject contents	Course content – laboratory LABORATORY Analysis of measurement data. Calibration. Measurement of RLC parameters. Oscilloscope measurement. Power measurement of three phase circuits. Measurement of sinusoidal and distorted waveforms. Computer processing of measurement signals. Electrical temperature measurements. Examination of selected displacement sensors.						
Prerequisites and co-requisites	Basic knowledge of electrical engineering and electrical circuit analysis. Knowledge of the Metrology I course.						
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	Practical exercise		60.0%		100.0%		
Recommended reading	Basic literature		1. Praca zbiorowa (red. Swęrowski L.): METROLOGIA. Skrypt do laboratorium. Wydawnictwo Politechniki Gdańskiej, 2009.				
	Supplementary literature		1. Chwaleba A., Poniński M., Siedlecki A.: Metrologia elektryczna. WNT, 2003. 2. Turmański S.: Technika pomiarowa. WNT, 2007 (2013, 2020). 3. Lisowski M.: Podstawy metrologii. Oficyna Wydawnicza Politechniki Wrocławskiej, 2011.				

	eResources addresses	
Example issues/ example questions/ tasks being completed	<ol style="list-style-type: none"> 1. Explain the concepts of median and modal values. 2. Measurement error of insensitivity in a Wheatstone bridge. 3. The methods and sensors used for the teperature measurements. 	
Practical activites within the subject	Not applicable	

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