



Subject card

Subject name and code	Quality of Electric Energy (PQ I), PG_00036792						
Field of study	JAKOŚĆ ENERGII ELEKTRYCZNEJ (PQ I)						
Date of commencement of studies	October 2023		Academic year of realisation of subject		2025/2026		
Education level	first-cycle studies		Subject group				
Mode of study	Full-time studies		Mode of delivery		at the university		
Year of study	3		Language of instruction		Polish		
Semester of study	6		ECTS credits		4.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Department of Power Electronics and Electrical Machines -> Faculty of Electrical and Control Engineering -> Faculties of Gdańsk University of Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. inż. Jarosław Łuszcz				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	0.0	30.0	0.0	0.0	60
	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	60		5.0		35.0	100
Subject objectives	Presentation of the issues related to the quality of electricity in an industrial environment.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	K6_K05		applies safe work practices		[SK3] Ocena umiejętności organizacji pracy		
	K6_U09		is able to select power equipment for various load modes.		[SU1] Ocena realizacji zadania		
	K6_W10		apply the rules of processing, use and rational use of electrical energy		[SW1] Ocena wiedzy faktograficznej		
	K6_K01		applies specialist knowledge		[SK5] Ocena umiejętności rozwiązywania problemów występujących w praktyce		
Subject contents	Course content – lecture Power quality indices. Standardization requirements. Reasons for the degradation of energy quality. Sources of harmonic distortions. The effects of poor energy quality.						
Prerequisites and co-requisites							
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	Task realisation		60.0%		100.0%		
Recommended reading	Basic literature		Hanzelka, Zbigniew, Jakość dostawy energii elektrycznej: zaburzenia wartości skutecznej napięcia. Komitet Elektrotechniki Polskiej Akademii Nauk. Kraków: Wydawnictwa AGH, 2013. Kowalski, Zbigniew, Jakość energii elektrycznej. Łódź: Wydawnictwo Politechniki Łódzkiej, 2007.				
	Supplementary literature		R. C. Dugan, M. F. McGranaghan, S. Santoso, H. W. Beaty 2012: Electrical Power Systems Quality, 3th edition, The McGraw-Hill Companies, Inc., NY, USA, 2012, ISBN 978-0071761550. Baggini, A.B. Handbook of Power Quality; Wiley Online Library: Hoboken, NJ, USA, 2008; ISBN 9780470065617.				
	eResources addresses						

Example issues/ example questions/ tasks being completed	Assessment of power quality compliance with the requirements of standards,
Practical activities within the subject	Not applicable

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