

GDAŃSK UNIVERSITY

Subject card

Subject name and code	Energoelectronics and Control of Electrical Drives, PG_00047624								
Field of study	Automatic Control, Cybernetics and Robotics								
Date of commencement of studies	October 2022		Academic year of realisation of subject			2024/2025			
Education level	first-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	3		Language of instruction			Polish			
Semester of study	6		ECTS credits			3.0	3.0		
Learning profile	general academic profile		Assessment form			assess	assessment		
Conducting unit	Department of Autom	atic Control ->	Faculty of Elec	tronics, Teleco	ommuni	cations	and Informati	CS	
Name and surname	Subject supervisor		dr inż. Marcin Pazio						
of lecturer (lecturers)	Teachers		dr inż. Marcin						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Projec	t	Seminar	SUM	
	Number of study hours	30.0	0.0	15.0	0.0		0.0	45	
	E-learning hours included: 0.0								
Learning activity and number of study hours	Learning activity	Participation in classes includ plan		Participation i consultation h	ticipation in sultation hours		udy	SUM	
	Number of study hours	45		3.0		27.0		75	
Subject objectives	Introduction to power electronic design (converters AC/DC, DC/DC, DC/AC) and drives control design.							l design.	
Learning outcomes	Course out	Subject outcome			Method of verification				
	[K6_U03] can design required specification a simple device, facil carry out a process, s field of study, using s methods, techniques materials, following e standards and norms technologies specific study and experience the professional engi environment				[SU1] Assessment of task fulfilment				
	[K6_K02] is ready to critically assess possessed knowledge and acknowledge the importance of knowledge in solving cognitive and practical problems		The student can use industry literature in the field power electronics			[SK2] Assessment of progress of work			

2 Electric drives characteristics 3 Direct current machines principles 4 Direct current machines construction 5 Commutation in direct current machines 6 Direct current engines 8 One phase transformers 9 Onter contrent engines 10 Teactomer efformation 11 Induction machines induction engines 12 Sip 13 Three phase induction engines 14 One phase induction engines 15 Induction engine speed control 16 Induction engine speed control 17 Synchronous machines 18 Power factor 19 Tachometer generator 20 Micromachines 21 Electrical heating components 22 Micromachines 23 Electrical neating components 24 Inductive heating components 25 Ontor design for electric drives 26 Ontrop service 27 Contactor selection 28 Direct current selection 29 Direction 30 Step inductor releases 31 Trace 32 Protection design for electric drives									
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