

GDAŃSK UNIVERSITY

Subject card

Subject name and code	Digital Information Exchange Protocols, PG_00016958								
Field of study	Automation, Robotics	and Control S	ystems						
Date of commencement of studies	February 2023		Academic year of realisation of subject			2023/2024			
Education level	second-cycle studies		Subject group						
Mode of study	Full-time studies		Mode of delivery			at the university			
Year of study	1		Language of instruction			Polish			
Semester of study	2		ECTS credits			2.0			
Learning profile	general academic profile		Assessment form			assessment			
Conducting unit	Department of Metrology and Information Systems -> Faculty of Electrical and Control Engineering					ring			
Name and surname	Subject supervisor		dr inż. Michał Ziółko						
of lecturer (lecturers)	Teachers		dr inż. Michał	Ziółko					
Lesson types and methods	Lesson type	Lecture	Tutorial Laboratory Projec		t	Seminar	SUM		
of instruction	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 classes includ plan	n didactic ed in study	Participation in consultation hours		Self-study		SUM	
	Number of study 15 hours			2.0		33.0		50	
Subject objectives	Introduce students with some of the protocols of sending information.								
Learning outcomes	Course outcome Subject outcome Method of verification								
	K7_W03		The student selects a communication protocol appropriate to the needs of the process and operating conditions of the measurement system. Correctly interprets data sent using a given protocol.			[SW3] Assessment of knowledge contained in written work and projects			
	K7_U11		The student selects a communication protocol appropriate to the needs of the process and operating conditions of the measurement system.			[SU1] Assessment of task fulfilment			
	K7_U05		The student selects a communication protocol appropriate to the needs of the process and operating conditions of the measurement system. Correctly interprets data sent using a given protocol.			[SU1] Assessment of task fulfilment			
	K7_K02		The student directs the work of the laboratory group or makes measurements or documents them.			[SK1] Assessment of group work skills			
Subject contents	Laboratory exercises for the transmission of information using different protocols and interfaces. The study of the performance of protocols used in the industry using various transmission media (eg, serial interfaces, ethernet). Transferring information with using the GPIB standard.								
Prerequisites and co-requisites	Basic knowledge of measurement systems. Basic knowledge of programming in LabVIEW environment.								
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and criteria	Subject passing criteria		Passing threshold			Percentage of the final grade			
	Work at laboratory excersises		60.0%			50.0%			
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Recommended reading	Basic literature	1. Information materials preprared by teacher.				
	Supplementary literature	 Mielczarek W.: Szeregowe interfejsy cyfrowe. HELION, 1993. Świsulski D.: Systemy Pomiarowe. Laboratorium. Wydawnictwo Politechniki Gdańskiej. Gdańsk 2004. 				
	eResources addresses	Adresy na platformie eNauczanie: CYFROWE PROTOKOŁY WYMIANY INFORMACJI [2023/24] - Moodle ID: 32225 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=32225				
Example issues/ example questions/ tasks being completed	The structure of Modbus protocol.					
	Calculating checksum compatible with Modbus protocol.					
	Communication with industrial equipment using ADAM ASCII protocol.					
	Communication with laboratory equip	nmunication with laboratory equipment using SCPI language and GPIB interface.				
Work placement	Not applicable					