



Subject card

Subject name and code		Distributed Measurement Systems, PG_00049347						
Field of study		Biomedical Engineering, Biomedical Engineering, Biomedical Engineering						
Date of commencement of studies		October 2021	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		4	Language of instruction			Polish		
Semester of study		7	ECTS credits			2.0		
Learning profile		general academic profile	Assessment form			assessment		
Conducting unit		Department of Biomedical Engineering -> Faculty of Electronics, Telecommunications and Informatics						
Name and surname of lecturer (lecturers)		Subject supervisor		prof. dr hab. inż. Piotr Jasiński				
		Teachers		prof. dr hab. inż. Piotr Jasiński dr inż. Grzegorz Jasiński				
Lesson types and methods of instruction		Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
		Number of study hours	15.0	0.0	15.0	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		18.0		50
Subject objectives		The aim of the course is to acquaint students with typical solutions used in distributed measurement systems.						
Learning outcomes		Course outcome		Subject outcome		Method of verification		
		[K6_K02] is ready to critically assess possessed knowledge and acknowledge the importance of knowledge in solving cognitive and practical problems		Student will be able to present information on the distributed measurement systems.		[SK5] Assessment of ability to solve problems that arise in practice		
		[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		The student will have knowledge of the construction and application of distributed interfaces .		[SW1] Assessment of factual knowledge		
		[K6_U02] can perform tasks related to the field of study in an innovative way as well as solve complex and nontypical problems, applying knowledge of physics, in changing and not fully predictable conditions		The student will be able to choose the right solution in the construction / application of distributed interface.		[SU2] Assessment of ability to analyse information		
Subject contents		Configuration of measuring systems. The structure of the measuring system. The sensors in measuring systems. Hardware measurement system. Measurement interfaces. Data transmission in the telephone network. Smart House - EIB. Industrial distributed systems CAN, Profibus. Lonworks. Wireless systems.						
Prerequisites and co-requisites								

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Laboratory	50.0%	30.0%
	Lecture	50.0%	70.0%
Recommended reading	Basic literature	W. Nawrocki, Rozproszone systemy pomiarowe, WKŁ 2006  Jerzy Mikulik, Europejska Magistrala Instalacyjna, merten 2008  D. Reynders, S. Mackay, E. Wright Practical Industrial Data Communications, Elsevier 2004	
	Supplementary literature	HART - Application guide HCF LIT 34	
	eResources addresses	Adresy na platformie eNauczanie: Rozproszone systemy pomiarowe [2024/25] - Moodle ID: 42046 <a href="https://enauczanie.pg.edu.pl/moodle/course/view.php?id=42046">https://enauczanie.pg.edu.pl/moodle/course/view.php?id=42046</a>	
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		

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