



Subject card

Subject name and code	Distributed Measurement Systems, PG_00049347						
Field of study	Biomedical Engineering						
Date of commencement of studies	October 2022	Academic year of realisation of subject			2025/2026		
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				
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_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		
	[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 distributed interfaces .			[SW1] Assessment of factual knowledge		
[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			
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		
	Lecture		50.0%		70.0%		
	Laboratory		50.0%		30.0%		

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 eNauczenie:
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	