



Subject card

Subject name and code	Operating Systems of Industrial Computers, PG_00049432						
Field of study	Electronics and Telecommunications						
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				1.0	
Learning profile	general academic profile	Assessment form				exam	
Conducting unit	Department of Signals and Systems -> Faculty of Electronics, Telecommunications and Informatics						
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Iwona Kochańska					
	Teachers	dr hab. inż. Iwona Kochańska					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	0.0	0.0	15
	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	15	1.0		9.0	25	
Subject objectives	The aim of the course is to provide knowledge about the architecture of operating systems used in industrial computers.						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	[K6_W03] Knows and understands, to an advanced extent, the construction and operating principles of components and systems related to the field of study, including theories, methods and complex relationships between them and selected specific issues - appropriate for the curriculum	The student knows at an advanced level the architecture of industrial computer operating systems			[SW1] Assessment of factual knowledge		
	[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 knows and understands at an advanced level programming methods and techniques for operating systems used in industrial computers			[SW1] Assessment of factual knowledge		
Subject contents	Introduction Architecture of industrial computer operating systems POSIX standard Operating system kernel services Process Manager Resource manager QNX operating system Linux operating systems in industrial computers MS Windows operating systems in industrial computers						
Prerequisites and co-requisites							

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
		Midterm colloquium	60.0%
Recommended reading	Basic literature	A. S. Tanenbaum, „Modern Operating Systems. Fourth Edition”, Global Edition	
	Supplementary literature	1. Tammy Noergaard, Embedded Systems Architecture: A Comprehensive Guide for Engineers and Programmers, Newnes, Elsevier 2005	
	eResources addresses	Adresy na platformie eNauzanie:	
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		

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