

Subject card

Operating Systems of Industrial Computers, PG_00049432								
Electronics and Telecommunications								
October 2020		Academic year of realisation of subject		2023/2024				
first-cycle studies		Subject group		Optional subject group Subject group related to scientific research in the field of study				
Full-time studies		Mode of delivery			at the university			
4		Language of instruction			Polish			
7		ECTS credits			1.0			
general academic profile		Assessment form			exam			
				s, Telec	communications and Informatics			
Subject supervisor		dr hab. inż. Iwona Kochańska						
Teachers		dr hab. inż. Iwona Kochańska						
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			Participation in consultation hours		Self-study		SUM	
Number of study hours	15		1.0		9.0		25	
The aim of the course is to provide knowledge about the architecture of operating systems used in industrial computers.								
Course out	Course outcome Subject outcome Method of verification						fication	
understands, to an a extent, the construction operating principles of components and systo the field of study, it theories, methods ar relationships betwee selected specific issues.	inderstands, to an advanced extent, the construction and inperating principles of components and systems related to the field of study, including theories, methods and complex elationships between them and delected specific issues -					[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			
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								
	Electronics and Telectocotober 2020 first-cycle studies Full-time studies 4 7 general academic production of the course out [K6_W03] Knows an understands, to an a extent, the construct operating principles of components and system to the field of study, theories, methods ar relationships betwee selected specific issuappropriate for the course industrial computers. Course out [K6_W03] Knows an understands, to an a extent, the construct operating principles of components and system to the field of study, theories, methods ar relationships betwee selected specific issuappropriate for the course industrial computers of programming devices and techniques of programming devices or programmable elesystems specific to the study, and organisat systems using computers using computers. Introduction Architecture of indust POSIX standard Operating system ker Process Manager Resource manager QNX operating system ker Process Manager Resource manager QNX operating system syste	Cotober 2020 first-cycle studies Full-time studies 4 7 general academic profile Department of Marine Electronic Systems specific to the field of study, and organisation of systems specific to the field of study. 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Course outcome [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 [K6_W04] Knows and understands, to an advanced extent, the principles of computer software development or 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 study, and organisation of systems using computers or such devices Introduction Architecture of industrial computer operating system kernel services Process Manager Resource manager QNA operating system kernel services Process Manager Resource manager QNA operating system kernel services Process Manager Resource manager QNA operating systems in industrial computers	Electronics and Telecommunications October 2020 Academic year of realisation of subject first-cycle studies Subject group Full-time studies Mode of delivery 4 Language of instruction from ECTS credits general academic profile Department of Marine Electronic Systems -> Faculty of Electronic Subject supervisor Teachers Department of Marine Electronic Systems -> Faculty of Electronic Subject supervisor Teachers Department of Marine Electronic Systems -> Faculty of Electronic Subject supervisor Teachers Department of Marine Electronic Systems -> Faculty of Electronic Subject supervisor Teachers Department of Marine Electronic Systems -> Faculty of Electronic Subject supervisor Teachers Department of Marine Electronic Systems -> Faculty of Electronic Subject supervisor Teachers Department of Marine Electronic Systems -> Faculty of Electronic Subject subject on July of Individual Indivi	Electronics and Telecommunications October 2020 Academic year of realisation of subject first-cycle studies Subject group Full-time studies Mode of delivery 4 Language of instruction 7 ECTS credits general academic profile Assessment form Department of Marine Electronic Systems -> Faculty of Electronics, Telect of the hab. inż. Iwona Kochańska Teachers dr hab. inż. Iwona Kochańska Lesson type Lecture Tutorial Laboratory Project Number of study hours E-learning hours included: 0.0 Learning activity Participation in didactic classes included in study plan Number of study hours The aim of the course is to provide knowledge about the architecture of or industrial computers. Course outcome [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 [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 Introduction Architecture of industrial computer operating systems Introduction	Electronics and Telecommunications October 2020 Academic year of realisation of subject first-cycle studies Subject group Option Subject group Academic year of realisation of subject Full-time studies Mode of delivery 4 Language of instruction Polish 7 ECTS credits 1.0 general academic profile Assessment form Department of Marine Electronic Systems -> Faculty of Electronics, Telecommunications Subject supervisor Teachers dr hab. inž. Iwona Kochańska Lesson type Lecture Number of study Number of study Number of study Participation in didactic classes included in study plan Number of study Number of study Participation in didactic classes included in study plan Number of study Number of study Number of study Participation in didactic classes included in study plan Number of study Number of study Number of study Participation in didactic classes included in study plan Number of study Number of study Participation in didactic classes included in study plan Number of study Number of study Number of study Participation in didactic classes included in study plan Number of study Number of study Participation in didactic classes included in study plan Number of study Number of study Participation in didactic classes included in study plan Number of study Participation in didactic classes included in study plan Number of study Participation in didactic classes included in study plan Number of study Participation in didactic classes included in study plan Number of study Participation in didactic classes included in study plan The student knows at an advanced level the architecture of industrial computer operating systems In the student knows and understands at an advanced level programming methods and techniques of programming methods and techniques of programming methods and techniques of operating systems The student knows and understands at an advanced level programming methods and techniques for operating systems The student knows and understands at an advanced level programming me	Electronics and Telecommunications October 2020 Academic year of realisation of subject first-cycle studies Subject group Optional subject group subject group relate research in the field steep represent the university at the university at the university subject group relate research in the field steep research in the steep research in the field steep research in the steep research in the tensitiest research in the tensitiest research in the steep research in the field steep research in the steep research in the field steep research in the steep research in the field steep research in the field steep research in the steep research in the subject outcome steep research in the ste	

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Assessment methods	Subject passing criteria	Passing threshold	Percentage of the final grade		
and criteria	Midterm colloquium	60.0%	100.0%		
Recommended reading	Basic literature	A. S. Tanenbaum, "Modern Operating Systems. Fourth Edition", Global Edition			
	Supplementary literature	 Tammy Noergaard, Embedded Systems Architecture: A Comprehensive Guide for Engineers and Programmers, Newnes, Elsevier 2005 			
	eResources addresses	Adresy na platformie eNauczanie:			
		Systemy operacyjne komputerów przemysłowych 2023 - Moodle ID: 25620			
	https://enauczanie.pg.edu.pl/moodle/course/view.php?id=		e/course/view.php?id=25620		
Example issues/ example questions/ tasks being completed					
Work placement	Not applicable				

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