GDAŃSK UNIVERSITY OF TECHNOLOGY

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 2020	Academic year of realisation of subject	2023/2024
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 Marine Electronic 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%	100.0%
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 eNauczanie: Systemy operacyjne komputerów przemysłowych 2023 - Moodle ID: 25620 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=25620	
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		