



## Subject card

Subject name and code	Computer networks - laboratories, PG_00045323						
Field of study	Data Engineering						
Date of commencement of studies	October 2023		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	3		Language of instruction		Polish		
Semester of study	6		ECTS credits		2.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Department of Computer Communications -> Faculty of Electronics, Telecommunications and Informatics						
Name and surname of lecturer (lecturers)	Subject supervisor		mgr inż. Jakub Grochowski				
	Teachers		mgr inż. Jakub Grochowski  dr hab. inż. Artur Tomaszewski				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	15.0	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		4.0		31.0	50
Subject objectives	Acquiring the skills to design, build and configure computer networks.Demonstration of skills to identify and analyze selected protocols and mechanisms of LAN and WAN networks						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_W02] Knows and understands the standards of network management, architecture, technologies and services of telecommunications networks. Knows the main protocols of packet networks, understands the operation of local networks and network connection rules.		The student demonstrates knowledge of the elements included in the network (switches, routers)		[SW1] Assessment of factual knowledge		
	[K6_U02] designs, analyses correctness and creates functional specification of IT systems, selects appropriate measures, creates quality models, prepares and assesses their design documentation.		Student designs, builds and configures a computer network and analyzes the correctness of its work		[SU1] Assessment of task fulfilment [SU4] Assessment of ability to use methods and tools		
	[K6_U06] Independently solves complex engineering tasks using literature, materials and devices, prepares extensive documentation of the developed solution using appropriate description techniques.		Student is able to configure network devices and systems using switch and router software		[SU1] Assessment of task fulfilment [SU4] Assessment of ability to use methods and tools		

Subject contents	Lab.  1. Network Management 2. Mechanisms of application communication 3. Static and Dynamic Routing 4. 802.11 wireless network configuration 5. IP Network Diagnostics  6. Network monitoring		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	lab.	50.0%	100.0%
Recommended reading	Basic literature	Scripts and didactic powers for specific laboratory exercises  Nowicki K.: Monitorowanie i bezpieczeństwo sieci komputerowych, WN AM Szczecin, 2016	
	Supplementary literature	Nowicki K., Woźniak J.: Przewodowe i bezprzewodowe sieci LAN, OW PW 2002  Nowicki K.: Ethernet - sieci, mechanizmy, Infotech	
	eResources addresses	Adresy na platformie eNauczanie:	
	Example issues/ example questions/ tasks being completed	Build a reliable network  Build a secure network  Build an efficient network	
Work placement	Not applicable		

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