GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Computer Networks - laboratory, PG_00048819		
Field of study	Electronics and Telecommunications		
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	dr inż. Krzysztof Nowicki	
	Teachers	dr inż. Krzysztof Nowicki	

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	0.0	0.0	30.0	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

Familiarize students with the actual hardware solutions, networking devices diagnostic methods, principles of management of the networks, ensuring security of computer networks

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_W35] Knows the concepts of the technique of signal transmission, operation of telecommunications networks and multimedia services and the rules for providing them	The student knows the concepts of IPv4 network diagnostics, network equipment management, VLAN, Static and dynamic routing, datagram filtering, network security and principles of wireless networks	[SW1] Assessment of factual knowledge
[K6_U31] can identify telecommunications network architectures, differentiates their areas and functional elements, evaluates the quality of service delivery, calculates parameters of functional elements	The student is able to distinguish between areas of computer networks operation and to design, configure and evaluate the correctness of computer networks operation	[SU2] Assessment of ability to analyse information [SU4] Assessment of ability to use methods and tools

Subject contents

IPv4 Network Diagnostics,

IPv6
Management of Network Hardware
Virtual LANs (VLANs)
Static Routing
Dynamic Routing
Cisco ACL
Firewall filtering datagrams
WiFi 802.11 Wireless Networks
Modes of access points
Network security of IEEE 802.11

<table>
<tr><td>Prerequisites and co-requisites</td><td colspan="3">Lecture "Computer Networks"</td></tr>
<tr><td>Assessment methods and criteria</td><td colspan="3"><table><tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr><tr><td>Practical exercises - checking + rating implementation exercises</td><td>50.0%</td><td>100.0%</td></tr></table></td></tr>
<tr><td rowspan="3">Recommended reading</td><td>Basic literature</td><td colspan="2">Dedicated auxiliary materials - scripts

Nowicki K., Światowiak J.: Protokoły IPv6, PG, 2002

Nowicki K., Woźniak J.: Przewodowe i bezprzewodowe sieci LAN, OW PW 20</td></tr>
<tr><td>Supplementary literature</td><td colspan="2">Nowicki K., Uhl T. : Monitorowanie i bezpieczeństwo sieci komputerowych, WN AMG, 2016</td></tr>
<tr><td>eResources addresses</td><td colspan="2">Adresy na platformie eNauczanie:</td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td colspan="3">Build a network of reliable
Build a network is a safe</td></tr>
<tr><td>Work placement</td><td colspan="3">Not applicable</td></tr>
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