

Subject card

Subject name and code	Computer networks, PG_00143814						
Field of study	Informatics						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2027/2028		
Education level	Bachelor's studies		Subject group		Obligatory subject group in the field of study Subject group related to scientific research in the field of study		
Mode of study	part-time studies		Mode of delivery		at the university		
Year of study	3		Language of instruction		Polish		
Semester of study	5		ECTS credits		4.0		
Learning profile	academic		Assessment form		exam		
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Bartosz Marcinkowski				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	20.0	0.0	20.0	0.0	0.0	40
	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	40		0.0		60.0	100
Subject objectives	Presentation of the principles of computer networks, the devices and communication protocols used in them communication devices and protocols and the services they offer. Preparing students to create topologies, configuration and diagnostics of networks built with the use of Cisco routers and switches preparation for the Cisco Certified Network Associate (CCNA) certification in the scope of semester I Routing & Switching along with obtaining a course completion certificate.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[INFL3_W10] knows the basic principles of occupational health and safety in the IT profession		Safely uses network equipment for experiments and projects		[SW4] test/exam - oral or written		
	[INFL3_U07] uses advanced functionalities of operating systems, especially related to network aspects		Has knowledge of operating systems operating systems, network technologies network technologies, including basic communication protocols		[SU4] test/exam - oral or written		
	[INFL3_W08] has knowledge of network technologies, including basic communication protocols, security and construction of network applications		Lists and defines the protocols used in LANs Characterises routing protocols RIP, OSPF, EIGRP		[SW4] test/exam - oral or written		
Subject contents	Introduction to TCP/IP networks Network protocols and communication Network devices - hubs, bridges, switches, routers Access to the network - MAC addresses, ARP protocol, STPs Ethernet technology, types of cabling MAC addressing, ARP protocol, STP Ethernet technology, types of cabling Network layer - static routing, dynamic routing - RIP, OSPF, EIGRP VLAN technology Transport layer - TCP and UDP protocols IP addressing ver. 4 and 6 Subdivision of IP networks into subnetworks Application layer, servers WWW, DNS, MAIL, DHCP, NAT Network security, ACL Scaling and aggregation Network management - SNMP protocol, MIB						

Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
		51.0%	50.0%
		51.0%	50.0%
Recommended reading	Basic literature	Cisco Networking Academy, Routing and Switching Essentials Companion Guide, Cisco Press, Indianapolis 2022	
	Supplementary literature	Cisco Networking Academy, Routing and Switching Essentials Companion Guide, Cisco Press, Indianapolis 2022	
	eResources addresses		
Example issues/ example questions/ tasks being completed	-		
Work placement	Not applicable		

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