

Subject card

Subject name and code	Computer Networks, PG_00156509						
Field of study	Informatics and Econometrics						
Date of commencement of studies	October 2024		Academic year of realisation of subject		2024/2025		
Education level	Master's studies		Subject group		Obligatory subject group in the field of study		
Mode of study	full-time studies		Mode of delivery		at the university		
Year of study	1		Language of instruction		Polish		
Semester of study	2		ECTS credits		3.0		
Learning profile	academic		Assessment form		credit		
Conducting unit	Department of Business Informatics -> Faculty of Management -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr Marek Markowski				
	Teachers		dr Marek Markowski				
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	15.0	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		15.0		20.0	50
Subject objectives	The aim of the course is to prepare students to create redundant local network topologies through the skillful selection, configuration and diagnostics of network switches to meet the needs of corporate networks.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[liEMU2_K03] The student is able to communicate freely with the public inside and outside the workplace, transfer his knowledge and share his skills through various media.	Efficient problem solving and discussion.	[SK1] oral statement/conversation/discussion [SK5] implementation of a problem task
	[liEMU2_K01] The student understands the need for continuous completion and deepening of acquired knowledge. The student inspires and organizes others' learning processes.	Understanding of necessity of life-long learning.	[SK1] oral statement/conversation/discussion [SK6] demonstration of practical skills
	[liEMU2_U02] The student is able to proficiently acquire detailed information about economic processes and phenomena through direct observation, planned experimentation or database queries, as well as collect and process it using modern information technology tools.	Effective acquisition of data from different sources.	[SU5] implementation of a problem task [SU6] demonstration of practical skills
	[liEMU2_K02] The student can communicate freely with the public on specialised topics in the field of computer science and econometrics in and outside the workplace, communicate his knowledge and share his skills through various media. Culturally participates in discussions, is not afraid to ask questions and knows how to give constructive criticism.	Effective communication and cooperation in group work.	[SK5] implementation of a problem task [SK6] demonstration of practical skills
	[liEMU2_W04] The student has an in-depth knowledge of advanced mathematical, statistical, econometric and IT methods that enable the acquisition, processing and analysis of data reflecting the functioning and growth of the national economy and its components, as well as the phenomena and processes occurring in their environment.	Knowledge of databases and mathematical, statistical and computer modelling tools.	[SW4] test/exam - oral or written [SW5] implementation of a problem task
	[liEMU2_U08] The student can analyse business needs and, as appropriate, configure and apply modern information and communication technologies in business management and business communication.	Configuration and efficient use of used software.	[SU5] implementation of a problem task [SU6] demonstration of practical skills
	[liEMU2_W07] The student has an extended and established knowledge of ethical norms applicable to business, good practices for its conduct and legal regulations for the protection of intellectual property. The student has an extended knowledge of the risks and responsibilities associated with the computerization of business processes. The student knows the principles of netiquette.	Knowledge in the area of specialization, intellectual property, risk and responsibility in business.	[SW4] test/exam - oral or written [SW5] implementation of a problem task
Subject contents	1. LAN Architecture. 2. Introduction to Network Switch Security. 3. Virtual LANs (VLANs). 4. VTP Protocol. 5. Spanning Tree Protocol (STP). 6. Traffic Transmission Between VLANs.		
Prerequisites and co-requisites	Theoretical knowledge of network issues - OSI model, types of networks (LAN, MAN, WAN), IP and MAC addressing, TCP and UDP protocols, types of media, types of network topologies, knowledge of how network devices function, ability to configure static routing and dynamic routing protocols.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Practical skills exam	51.0%	50.0%
	Theoretical exam	51.0%	50.0%

Recommended reading	Basic literature	Bibliography A.1. Used during lectures and laboratories - Lewis W., Akademia Sieci Cisco CCNA Exploration. Semestr 3. Przelaczanie sieci LAN i sieci bezprzewodowe, Rozdzial 1-6, Warszawa 2009. - Multimedialne materialy Cisco, CCNA 1 i 2: Przelaczanie sieci LAN i sieci bezprzewodowe, Rozdzial 1-6.
	Supplementary literature	A.2. Bibliography for individual studing - Wójcik W. (red.), Sieci komputerowe, Monografie PAN, Lublin 2011. - Winiarski J. (red); Sieci komputerowe w biznesie; Wydawnictwo Uniwersytetu Gdanskiego, Gdansk 2008 - Józefiok A., CCNA 200-125, Zostań administratorem sieci komputerowych CISCO, Helion, Gliwice 2018
	eResources addresses	
Example issues/ example questions/ tasks being completed	Troubleshoot connectivity issues.	
Work placement	Not applicable	

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