University of Gdańsk

Subject card

Subject name and code	Computer Networks, PG_00156618		
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	part-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	20.0	40.0	75

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
	[IiEMU2_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
	[IiEMU2_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
	[IiEMU2_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 cooperation in group work.	[SK5] implementation of a problem task [SK6] demonstration of practical skills
	[IiEMU2_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 modelling tools.	[SW4] test/exam - oral or written [SW5] implementation of a problem task
	[IiEMU2_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
	[IiEMU2_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.	[SW4] test/exam - oral or written [SW5] implementation of a problem task
	[IiEMU2_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 of used software.	[SU5] implementation of a problem task [SU6] demonstration of practical skills

Subject contents	1. LAN Architecture 2. Introduction to Network Switch Security 3. Virtual LANs (VLANs), 4. VTP Protocol. 5. Spacing 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 work, ability to configure static routing and dynamic routing protocols.

<table>
<tr><td>Assessment methods and criteria</td><td colspan="2"><table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>Practical skills exam</td><td>51.0%</td><td>50.0%</td></tr>
<tr><td>Theoretical exam</td><td>51.0%</td><td>50.0%</td></tr>
</table></td></tr>
<tr><td rowspan="3">Recommended reading</td><td>Basic literature</td><td>Bibliography

A.1. Used during lectures and laboratories

• Lewis W., Akademia Sieci Cisco CCNA Exploration. Semestr 3. Przełączanie sieci LAN i sieci bezprzewodowe, Rozdział 1-6, Warszawa 2009.
• Multimedialne materiały Cisco, CCNA 1 I 2: Przełączanie sieci LAN i sieci bezprzewodowe, Rozdział 1-6.</td></tr>
<tr><td>Supplementary literature</td><td>A.2. Bibliography for indiviual studing

• Wójcik W. (red.), Sieci komputerowe, Monografie PAN, Lublin 2011.
• Winiarski J. (red); Sieci komputerowe w biznesie; Wydawnictwo Uniwersytetu Gdańskiego, Gdańsk 2008
• Józefiok A., CCNA 200-125, Zostań administratorem sieci komputerowych CISCO, Helion, Gliwice 2018</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td colspan="2">Troubleshoot connectivity issues.</td></tr>
<tr><td>Work placement</td><td colspan="2">Not applicable</td></tr>
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