

## 关。GDAŃSK UNIVERSITY 多 OF TECHNOLOGY

## Subject card

Subject name and code	Computer Networks Administration, PG_00047956							
Field of study	Informatics							
Date of commencement of studies	October 2023		Academic year of realisation of subject			2026/2027		
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	4		Language of instruction			Polish		
Semester of study	7		ECTS credits			4.0		
Learning profile	general academic profile		Assessment form			exam		
Conducting unit	Department of Computer Communications -> Faculty of Electronics, Telecommunications and Informatics							
Name and surname of lecturers)	Subject supervisor		dr inż. Wojciech Gumiński					
	Teachers		dr inż. Wojciech Gumiński					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Projec	t	Seminar	SUM
	Number of study hours	15.0	0.0	30.0	0.0	0.0		45
	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	45		4.0		51.0		100
Subject objectives	The main objective of the course is to provide students with knowledge about the principles of administration of computer networks and to gain by them practical skills in the field of network monitoring and implementation of solutions which increase network reliability and network security.							

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Image: Note and understands, to an advanced extent, architecture, design and individual administrator. Student compares the methods of administrator compares the methods of administrator. Student makes plan of names and administrator. Student makes plan of names and administrator. Student makes plan of names and addresses of the devices.         ISW1] Assessment of factual involved generative student in envolved. Student makes plan of names and addresses of the devices.         ISW1] Assessment of factual involved generative student interesting addresses of the devices.         ISW1] Assessment of factual involved generative student interesting addresses of the devices.         ISW1] Assessment of factual involved generative student interesting addresses of the devices.         ISW1] Assessment of factual involved generative student interesting addresses of the devices.         ISW1] Assessment of factual involved generative student interesting addresses of the devices.         ISW1] Assessment of factual involved generative student interesting addresses of the devices.         ISW1] Assessment of factual involved generative student interesting addresses of the devices.         ISW1] Assessment of factual involved generative student interesting addresses of the devices.         ISW1] Assessment of factual involved generative student interesting addresses of the devices.         ISW1] Assessment of factual involved generative student interesting addresses of the devices.         ISW1] Assessment of factual involved generative student interesting addresses of the devices.         ISW1] Assessment of factual involved generative student interesting addresses of the devices.         ISW1] Assessment of factual involved generative student interesting addresses of the devices.         ISW1] Assessment of factual involved generative student interesting addresses o		programming methods and techniques as well as select and apply appropriate programming methods and tools in computer software development or programming devices or controllers using microprocessors or programmable elements or systems specific to the field of	Student uses tools to monitor the	fulfilment [SU3] Assessment of ability to use knowledge gained from the subject [SU4] Assessment of ability to					
Subject contents         Inderstands, to an advanced extent, standards and methods of IT systems administration, monitoring of processes courring in them and immunising them to undestrate phenomena and activities         Students choose the method of network. Students choose the method of network inventory.         ISU1 Assessment of task fulfilment           IKE_U03] can design, according to required specifications, and make a simple device, facility, system or carry out a process, specific to the field of study, using suitable methods, techniques, tools and materials, following engineering standards and norms, applying technologies specific to the field of study and experience gained in the professional engineering environment         Student was specific to the study and experience gained in the professional engineering environment         I. Network administrator tasks 2. Cooperation with systems administrator 3. Analysis and realization of network posits 4. Network addresses and names politics 5. Routes and network protocols selection 6. Network from monitoring and shaping 7. Network for counting and optime 8. Network services administration (UNW, PT, e-mai) 11. Network resource sharing 12. Domain administration 13. User and hardware selection           Prerequisites and co-requisites and criteria         Subject passing criteria         Passing threshold         Percentage of the final grade foo.0%           Recommended reading         Basic literature         M. Sportack, T. Northrup; Network analysis and Troubleshooling; Addison- Weeley Professional 1999           Supplementary literature eResources addresses         No requirements eResources addresses         No requirements eResources addresses <td></td> <td>understands, to an advanced extent, architecture, design principles and methods of hardware and software support for local and distributed information systems, including computing systems, databases, computer networks and information applications, as well as the principles of human cooperation with computers and computer-</td> <td>administrator. Student compares the methods of archiving data in the network. Student makes plan of names and</td> <td colspan="2"></td>		understands, to an advanced extent, architecture, design principles and methods of hardware and software support for local and distributed information systems, including computing systems, databases, computer networks and information applications, as well as the principles of human cooperation with computers and computer-	administrator. Student compares the methods of archiving data in the network. Student makes plan of names and						
Image: Incluined specifications, and make a simple device, facility, system of carry out a process, specific to the field of study, using suitable methods, techniques, tools and materials, following engineering standards and norms, applying technologies specific to the field of study and experience gained in the professional engineering environment         fulliment         [SU2] Assessment of ability to analyse information           Subject contents         1. Network administrator tasks 2. Cooperation with systems administrator 3. Analysis and realization of network goals 4. Network addresses and namee politics 5. Routes and network procession 6. Network flow counting and shaping 7. Network flow counting and optimization 8. Network servers administration (DHCP, DNS, WINS) 9. WAN access management (NAT, PAT, Proxy) 10. Network servers administration (UW, FTP, email) 11. Network resource sharing 12. Domain administration 3. User and hardware authentication. Network flow counting and fixing 17. Network documentation and hardware authentication. Network flow counting and polyministration 13. User and hardware authentication. Network flow counting and fixing 17. Network documentation and hardware authentication. Solo%           Prerequisites and coriteria         Subject passing criteria         Passing threshold         Percentage of the final grade           Practical exercise         50.0%         60.0%         40.0%         40.0%         40.0%         50.0%         40.0%         50.0%         40.0%         Supplementary literature         No requirements         Factical exercise         Adresy na platformic eNauczanie:         Example issues/         Supplementary literature         No requirements		understands, to an advanced extent, standards and methods of IT systems administration, monitoring of processes occurring in them and immunising them to undesirable phenomena and	Student uses tools to monitor the network. Students choose the method of						
network goals 4. Network addresses and names politics 5. Routes and network protocols selection 6.         Network flow monitoring and shaping 7. Network flow counting and optimization 8. Network services administration (DHCP, DNS, WINS) 9. WAN access management (NAT, PAT, Proxy) 10. Network servers administration (DHCP, DNS, WINS) 9. WAN access management (NAT, PAT, Proxy) 10. Network servers administration (DHCP, DNS, WINS) 9. WAN access management (NAT, PAT, Proxy) 10. Network servers administration (DHCP, DNS, WINS) 9. WAN access management (NAT, PAT, Proxy) 10. Network servers administration (DHCP, DNS, WINS) 9. WAN access management (NAT, PAT, Proxy) 10. Network servers administration (DHCP, DNS, WINS) 9. WAN access and network protocols selection administration 13. User and hardware authentication. Network privileges. 14. Remote access 15. Network security. Intruder indentyfication. 16. Network failures diagnosis and fixing 17. Network evolution, network documentation and hardware selection         Prerequisites       Subject passing criteria       Passing threshold       Percentage of the final grade         Assessment methods       Subject passing criteria       Passing threshold       Percentage of the final grade         Practical exercise       50.0%       60.0%         Written examination       50.0%       40.0%         Recommended reading       Basic literature       M. Sportack, T. Northrup; Networking Essentials Unleashed; Sams Publishing 2006         Supplementary literature       No requirements       J. Scott Haugdahi; Network Analysis and Troubleshooting; Addison-Wesley Professional 1999         Example issues/ example questions/ tas		required specifications, and make a simple device, facility, system or carry out a process, specific to the field of study, using suitable methods, techniques, tools and materials, following engineering standards and norms, applying technologies specific to the field of study and experience gained in the professional engineering		fulfilment [SU2] Assessment of ability to					
and co-requisites         Assessment methods and criteria       Subject passing criteria       Passing threshold       Percentage of the final grade         Practical exercise       50.0%       60.0%         Written examination       50.0%       40.0%         Recommended reading       Basic literature       M. Sportack, T. Northrup; Networking Essentials Unleashed; Sams Publishing 2006         J. Scott Haugdahl; Network Analysis and Troubleshooting; Addison- Wesley Professional 1999         Supplementary literature       No requirements         eResources addresses       Adresy na platformie eNauczanie:         Example issues/ example questions/ tasks being completed       Example issues/	Subject contents	network goals 4. Network addresses and names politics 5. Routes and network protocols selection 6. Network flow monitoring and shaping 7. Network flow counting and optimization 8. Network services administration (DHCP, DNS, WINS) 9. WAN access management (NAT, PAT, Proxy) 10. Network servers administration (WWW, FTP, e-mail) 11. Network resource sharing 12. Domain administration 13. User and hardware authentication. Network privileges. 14. Remote access 15. Network security. Intruder indentyfication. 16. Network failures diagnosis and fixing 17. Network evolution, network documentation and							
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Publishing 2006         J. Scott Haugdahl; Network Analysis and Troubleshooting; Addison-Wesley Professional 1999         Supplementary literature       No requirements         eResources addresses       Adresy na platformie eNauczanie:         Example issues/ example questions/ tasks being completed       Image: Completed		Written examination	50.0%	40.0%					
eResources addresses     Adresy na platformie eNauczanie:       Example issues/ example questions/ tasks being completed	Recommended reading	Publishing 2006 J. Scott Haugdahl; Network Analysis and Troubleshooting; Addison-							
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