

## 。 GDAŃSK UNIVERSITY OF TECHNOLOGY

## Subject card

Subject name and code	Networks Management, PG_00047957							
Field of study	Informatics							
Date of commencement of studies	October 2024		Academic year of realisation of subject			2027/2028		
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			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 Gierłowski					
	Teachers		dr inż. Tomasz Gierszewski					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Projec	t	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	15.0		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	The purpose of the course is to introduce theoretical knowledge and practical skills related to computer network management. Both management theory (network management models) / protocols, and specific tools, solutions and systems are covered by lecture and practical project.							

Course outcome	Subject outcome	Method of verification				
[K6_U07] can apply methods of process and function support, specific to the field of study	Student is capable of tasks related to network and service management and monitoring.	[SU1] Assessment of task fulfilment				
[K6_W44] knows and 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-computer interaction, the operation and evaluation criteria of data processing, storage and transfer methods, including computational algorithms, artificial intelligence and data mining as well as standards and methods of IT systems administration, monitoring of processes and robustness to undesirable phenomena and activities	Student knows different network management solutions and is capable of choosing them according to network environment properties.	[SW1] Assessment of factual knowledge				
[K6_W03] knows and understands, to an advanced extent, the construction and operating principles of components and systems related to the field of study, including theories, methods and complex relationships between them and selected specific issues - appropriate for the curriculum	Student knows and applies complex network management and maintainance solutions.	[SW1] Assessment of factual knowledge				
[K6_U09] can carry out a critical analysis of the functioning of existing technical solutions and assess these solutions, as well as apply experience related to the maintenance of technical systems, devices and facilities typical for the field of studies, gained in the professional engineering environment	Student is capable of configuring and maintainig a computer network.	[SU1] Assessment of task fulfilment				
<ul> <li>Theory of network management</li> <li>network management models,</li> <li>classes of IP systems.</li> </ul> Management methods <ul> <li>types, architectures,</li> </ul>						
protocols.  Network monitoring						
<ul> <li>problems, methods, use-cases,</li> <li>tools and systems.</li> </ul>						
<ul> <li>Wireless network management</li> <li>architectures,</li> <li>characteristics,</li> <li>enterprise systems,</li> <li>3GPP systems.</li> </ul>						
Basic familiarity with computer netwo	ork and IP network operation.					
Subject passing criteria Project Written exam	Passing threshold 50.0% 50.0%	Percentage of the final grade 50.0% 50.0%				
Basic literature W. Stallings: "Protokoły SNMP i RMON". Helion. Gliwice 2003						
Supplementary literature	No requirements					
Network monitoring   problems, methods, use-cases,  tools and systems.  Wireless network management  architectures,  characteristics,  enterprise systems,  3GPP systems.  Basic familiarity with computer network  Subject passing criteria  Project Written exam  Pasic literature	ork and IP network operation. Passing threshold 50.0% 50.0%	Percentage of the final g 50.0% 50.0%				
	Course outcome [K6_U07] can apply methods of process and function support, specific to the field of study [K6_W44] knows and 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-computer interaction, the operation and evaluation criteria of data processing, storage and transfer methods, including computational algorithms, artificial intelligence and data mining as well as standards and methods of IT systems administration, monitoring of processes and robustness to undesirable phenomena and activities [K6_W03] knows and understands, to an advanced extent, the construction and operating principles of components and systems related to the field of study, including theories, methods and complex relationships between them and selected specific issues - appropriate for the curriculum [K6_U09] can carry out a critical analysis of the functioning of existing technical solutions and assess these solutions, as well as apply experience related to the maintenance of technical systems, devices and facilities typical for the field of studies, gained in the professional engineering environment Theory of network management onetwork management models, classes of IP systems. Management methods . types, architectures, . tools and systems. Basic familiarity with computer network Subject passing criteria Project Written exam	Course outcome         Subject outcome           [K6_U07] can apply methods of process and function support         Student is capable of tasks related to retwork and service management and monitoring.           [K6_W44] knows and understands, to an advanced extent, architecture, design principles and methods of hardware and software support for local and distributed information systems, including computer networks and information applications, as well as the processing, storage and transfer methods, including computer interaction, the operation and evaluation criteria of data processing, storage and transfer methods, for and activities         Student knows and applies complex network management additions and is standards and methods of IT systems administration, monitoring of processes and robustness to undesitable phenomena and activities         Student knows and applies complex network management administration, monitoring of processes and robustness to undesitable phenomena and activities           [K6_W03] knows and understands, to an advanced extent, the construction and operating principles of complex network management solutions.         Student knows and applies complex network management solutions.           [K6_U09] can carry out a critical analysis of the functioning of existing technical solutions and assess these solutions, as well as apply experience related to the maintenance of technical systems.         Student is capable of configuring and maintaining a computer network.           Student knows and applies of configuring and process and facilities typical for the functioning of existing activities spectrum.         Student is capable of configuring and maintaining a computer network.           Theotry of network management mothods         Stude				

Example issues/ example questions/ tasks being completed	
Work placement	Not applicable

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