



Subject card

Subject name and code	Network Operating Systems, PG_00048056						
Field of study	Informatics, Electronics and Telecommunications						
Date of commencement of studies	February 2023		Academic year of realisation of subject		2022/2023		
Education level	second-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	1		Language of instruction		Polish		
Semester of study	1		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. Wojciech Gumiński				
	Teachers		dr inż. Wojciech Gumiński				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	15.0	0.0	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		4.0		16.0	50
Subject objectives	The main objective of the course is to provide students with the operation, construction and configuration of network operating systems.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[K7_U06] can analyse the operation of components, circuits and systems related to the field of study; measure their parameters; examine technical specifications; interpret obtained results and draw conclusions	Student will get practical experiences in configuring network sharing of servers resources.	[SU1] Assessment of task fulfilment
	[K7_U42] can solve engineering and research problems including design, assessment and maintenance of information systems and applications, using experimental methods and management techniques	Student will get practical experience in administration of application servers.	[SU1] Assessment of task fulfilment
	[K7_U06] can analyse the operation of components, circuits and systems related to the field of study; measure their parameters; examine technical specifications; interpret obtained results and draw conclusions	Student will get practical experiences in configuring network sharing of servers resources.	[SU1] Assessment of task fulfilment
	[K7_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 advanced technical systems, devices and facilities typical for the field of studies, gained in the professional engineering environment	Student get knowledge of administration of directory services.	[SU1] Assessment of task fulfilment
	[K7_W42] Knows and understands, to an increased extent, the principles and trends in the analysis and design of local and distributed IT systems and the basics of computer modeling and computerization of complex cognitive and decision-making processes.	Student lists the tasks of network operating systems. Student compares the network operating systems.	[SW1] Assessment of factual knowledge
	[K7_W03] Knows and understands, to an increased 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 classifies network services. Student determines the configuration of network services.	[SW1] Assessment of factual knowledge

Subject contents	1. Network operating systems classification		
	2. Network operating systems tasks		
	3. TCP/IP software in NOS structure		
	4. Internet protocol - IP		
	5. Transmission Control Protocol - TCP state diagram		
	6. Network communication using sockets		
	7. Network services		
	8. Network services configuration in Windows Server, Linux and Netware		
	9. Novell Directory Services - eDirectory		
	10. Windows domain		
	11. Active Directory		
	12. Remote access		
	13. Network shares and network printing		
	14. Security of network operating systems		
	15. Network operating systems administration tools		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Midterm colloquium	50.0%	50.0%
	Practical exercise	50.0%	40.0%
	Activity/presence	0.0%	10.0%
Recommended reading	Basic literature	Kirch O., Linux - podręcznik administratora sieci, O'Reilly 2000. Morimoto M., Windows Serwer 2003. Księga eksperta., Helion 2004.	
	Supplementary literature	Moncur M., Netware 5: administracja i konfiguracja systemu, Mikom 1999. A. Tanenbaum, Modern Operating Systems. A. Tanenbaum, Computer Networks.	
	eResources addresses	Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed	Configuration of servers for DHCP, DNS, HTTP, FTP services and ProxyHTTP as application server.		
	Configuration of Group Policies Objects in Active Directory.		
Work placement	Not applicable		