



Subject card

Subject name and code	Network Operating Systems, PG_00047744						
Field of study	Informatics						
Date of commencement of studies	October 2024	Academic year of realisation of subject			2025/2026		
Education level	second-cycle studies	Subject group			Optional subject group Subject group related to scientific research in the field of study		
Mode of study	Part-time studies	Mode of delivery			at the university		
Year of study	2	Language of instruction			Polish		
Semester of study	3	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 lecturer (lecturers)	Subject supervisor	dr inż. Wojciech Gumiński					
	Teachers	dr inż. Wojciech Gumiński mgr inż. Janusz Czaja					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	18.0	0.0	15.0	0.0	0.0	33
	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	33	10.0		57.0	100	
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	Students will get practical experience in administration of application servers.	[SU3] Assessment of ability to use knowledge gained from the subject [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	Students will get practical experience in administration of application servers.	[SU4] Assessment of ability to use methods and tools [SU1] Assessment of task fulfilment
	[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	Students will get practical experiences in configuring network sharing of servers resources.	[SW1] Assessment of factual knowledge
	[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	Students will get practical experience in administration of application servers.	[SU1] Assessment of task fulfilment [SU3] Assessment of ability to use knowledge gained from the subject
[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.	Students will get practical experiences in configuring network sharing of servers resources.	[SW1] Assessment of factual knowledge	
Subject contents	Network operating systems classification. NOS tasks. TCP/IP software in NOS structure. Internet protocol – IP. Transmission Control Protocol – TCP state diagram. Network socket communication. Network services. Network services configuration in Windows Server, Linux and Netware. Novell Directory Services – eDirectory. Windows domain. Active Directory. Remote access. Network printing. NOS security. Administration tools. Windows and Linux workstation network configuration. Windows and Linux server network configuration. DNS, DHCP, ARP, NAT, PROXY, Firewall. Network sharing and printing. Users and groups privileges and restrictions. Domain services in Windows and Netware.		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Midterm colloquium	50.0%	60.0%
	Written examination	50.0%	40.0%
Recommended reading	Basic literature	A. Tanenbaum, "Modern Operating Systems"; A. Tanenbaum "Computer networks"; R. Morimoto, "Windows Server"; C. Schroder, "Sieci Linux"	
	Supplementary literature	No requirements	
	eResources addresses	Adresy na platformie eNauczanie:	

Example issues/ example questions/ tasks being completed	DHCP configuration DNS configuration Configuration of Active Directory privileges
Work placement	Not applicable