University of Gdańsk

Subject card

Subject name and code	Operating Systems, PG_00178481		
Field of study	Informatics and Econometrics		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2026/2027
Education level	Bachelor's studies	Subject group	Obligatory subject group in the field of study 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	1	Language of instruction	Polish
Semester of study	1	ECTS credits	7.0
Learning profile	academic	Assessment form	credit
Conducting unit			
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Przemysław Jatkiewicz	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	8.0	0.0	32.0	0.0	0.0	40

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	40	2.0	133.0	175

Subject objectives

Familiarising students with operating systems and the roles they can play in a company's IT infrastructure.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[IiEL3_W08] Has advanced knowledge and understanding of the possibilities and dilemmas of using informatics and statistics tools and their importance in the context of changing needs	The student understands the structure and application of operating systems.	[SW4] test/exam - oral or written
[IiEL3_U12] Can design and implement IT systems to enhance business operations and effectively utilize modern ICT technologies for management and business communication	The student is able to install and configure Linux and Windows operating systems.	[SU5] implementation of a problem task
[IiEL3_U02] Can select or construct econometrics, informatics or statistics tools and apply them to describe and solve economic and social problems	The student is able to select and configure network services in Windows and Linux.	[SU5] implementation of a problem task

<table>
<tr><td>Subject contents</td><td>Lecture:
History, role and tasks of an operating system, classification of operating systems, concepts: resource, process, thread, file systems, installation, configuration and management of Linux, Linux shell commands, Linux directory services, Apache, openLDAP, SAMBA, installation and configuration of Windows, Windows server roles, network configuration, desktop configuration, device drivers, Windows shell commands, Windows directory services, AD Domain Services, AD Certificate Services, AD Lightweight Directory Services, AD Rights Management Services, AD Federation Services, shell scripts, batch files, PowerShell scripts, Bash scripts.
Laboratory classes:
Creating virtual machines, installing Ubuntu server LTS, installing SSH, creating, deleting, renaming files and directories, managing user accounts, managing file and directory permissions, hard and soft links, PAM modules, installing and managing OpenLDAP and SAMBA, LAMP server, Nginx application server, installing Windows Server, configuring drivers, networks, desktop, preparing the domain environment, adding objects to the domain, managing access to resources, security policies, DHCP service, DNS service, IIS application server, creating a bat batch file, creating a PowerShell script, creating a Bash script.</td></tr>
<tr><td>Prerequisites and co-requisites</td><td>None</td></tr>
<tr><td>Assessment methods and criteria</td><td>
<table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>Linux task implementation</td><td>51.0%</td><td>25.0%</td></tr>
<tr><td>Test exam</td><td>51.0%</td><td>50.0%</td></tr>
<tr><td>Windows task implementation</td><td>51.0%</td><td>25.0%</td></tr>
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<tr><td>Recommended reading</td><td>
<table>
<tr><td>Basic literature</td><td>Original script</td></tr>
<tr><td>Supplementary literature</td><td>Unix i Linux. Przewodnik Administratora. Evi Nemeth, Garth Snyder, Trent R. Hein , Ben Whaley , Dan Mackin. Helion

Biblia Windows Server. Podręcznik Administratora. Krzyszof Wołk, Wydawnictwo Psychosock

PowerShell dla administratorów systemów. Prosta automatyzacja zadań. Adam Bertram, Helion

Bash. Leksykon kieszonkowy. Przewodnik dla użytkowników i administratorów systemów. Arnold Robbins. Helion</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
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<tr><td>Example issues/ example questions/ tasks being completed</td><td>List the tasks of the DNS server.
Start the DHCP server and reserve an IP address for the specified client.</td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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