



Subject card

Subject name and code	Computer Systems Administration, PG_00053911						
Field of study	Informatics						
Date of commencement of studies	October 2020		Academic year of realisation of subject		2022/2023		
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	3		Language of instruction		Polish		
Semester of study	5		ECTS credits		5.0		
Learning profile	general academic profile		Assessment form		exam		
Conducting unit	Department of Computer Architecture -> Faculty of Electronics, Telecommunications and Informatics						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Tomasz Boiński				
	Teachers		dr inż. Piotr Rajchowski dr inż. Tomasz Boiński mgr inż. Szymon Olewniczak				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	0.0	15.0	15.0	0.0	60
	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	60		6.0		59.0	125
Subject objectives	The aim of the subject is to familiarize students with topics connected with administering Linux and Windows based servers and provide means of interoperability between them						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_W04] Knows and understands, to an advanced extent, the principles, methods and techniques of programming and the principles of computer software development or programming devices or controllers using microprocessors or programmable elements or systems specific to the field of study, and organisation of systems using computers or such devices		Student creates system scripts Student administers complex information systems		[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 describes system components in regard to computer system administration Student knows and describes complex system components in regard to computer system deployment and administration Student understands and describes cooperation of information systems in regard to computer system administration		[SW1] Assessment of factual knowledge		

Subject contents	1. Management of Windows systems 2. Administrative tools in Windows 3. Configuration and management of network in Windows 4. Internet Information Services - IIS 5. Hardware configuration in Windows systems 6. Windows Server Management 7. SQL Server Administration 8. User management in Linux systems 9. Advanced network administration in Linux systems 10. NIS and LDAP Directory Services 11. Filesystem management in Linux System 12. Construction of Linux Kernel 13. Mail servers in Linux systems 14. WWW and proxy servers in Linux systems 15. Printing and office software in Linux 16. XWindow configuration 17. Hardware support in Linux 18. Security in Linux Systems 19. Security in Windows Systems		
Prerequisites and co-requisites	Basic knowledge of Windows and Linux Systems		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Project	30.0%	25.0%
	Practical exercise	30.0%	25.0%
	Written exam	30.0%	50.0%

Recommended reading	Basic literature	<ul style="list-style-type: none"> - Linux distribution's dedicated web pages - mailing lists - Linux distribution's Wikis - Microsoft TechNet, http://technet.microsoft.com - Apache Web Server documentation, http://httpd.apache.org/docs/ - Linux Administrator's Security Guide, Kurt Seifried, 2001, http://www.linuxtopia.org/online_books/linux_administrators_security_guide/index.html
	Supplementary literature	No requirements
	eResources addresses	Adresy na platformie eNauczanie: 2022/2023 - Administrowanie Systemami Komputerowymi - Moodle ID: 21960 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=21960
Example issues/ example questions/ tasks being completed	<p>Iptables are:</p> <ol style="list-style-type: none"> a. simple firewall used in some Linux distributions b. A powerful packet filter c. The program that provides QoS d. a very complex, stateless firewall <p>BasicAuthentication mode in Apache:</p> <ol style="list-style-type: none"> a. sends the username and password in plain text each time a request is made b. is sensitive to eavesdrop only at the time of entering users login and password c. sends password as hashes d. uses an encrypted connection by default <p>Exim mail server uses SSL authentication with MySQL</p> <ol style="list-style-type: none"> 1.install Exim server and mysql database 2.configure the mail server so that the user authentication is based on entries in MySQL database 3.server allows receiving email only from selected domains 4.user reads mail using POP or IMAP-SSL-SSL (optional) 5.create at least 2 users who will use the e-mail system 	
Work placement	Not applicable	