



Subject card

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|---|--|---|-------------------------------------|------------|--|---------|-----|
| Subject name and code | Computer Systems Administration, PG_00053911 | | | | | | |
| Field of study | Informatics | | | | | | |
| Date of commencement of studies | October 2021 | Academic year of realisation of subject | | | 2023/2024 | | |
| 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. Krzysztof Cwalina dr inż. Tomasz Boiński | | | | | |
| 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_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 | | |
| | [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 | | |

| Subject contents | <ol style="list-style-type: none"> 1. Menagement 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 | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Subject passing criteria</th> <th style="width: 30%;">Passing threshold</th> <th style="width: 30%;">Percentage of the final grade</th> </tr> </thead> <tbody> <tr> <td>Written exam</td> <td>30.0%</td> <td>50.0%</td> </tr> <tr> <td>Practical exercise</td> <td>30.0%</td> <td>25.0%</td> </tr> <tr> <td>Project</td> <td>30.0%</td> <td>25.0%</td> </tr> </tbody> </table> | | | Subject passing criteria | Passing threshold | Percentage of the final grade | Written exam | 30.0% | 50.0% | Practical exercise | 30.0% | 25.0% | Project | 30.0% | 25.0% |
| Subject passing criteria | Passing threshold | Percentage of the final grade | | | | | | | | | | | | | |
| Written exam | 30.0% | 50.0% | | | | | | | | | | | | | |
| Practical exercise | 30.0% | 25.0% | | | | | | | | | | | | | |
| Project | 30.0% | 25.0% | | | | | | | | | | | | | |

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| 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 | <p>Adresy na platformie eNauczenie:</p> <p>2023/2024 - Administrowanie Systemami Komputerowymi - Moodle ID: 27925</p> <p>https://enauczenie.pg.edu.pl/moodle/course/view.php?id=27925</p> |
| 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 | |