

FACULTY OF COMPUTER SCIENCE AND MANAGEMENT / DEPARTMENT					
SUBJECT CARD					
Name in Polish Administrowanie Systemami					
Name in English System Administration					
Main field of study (if applicable): Computer Science					
Specialization (if applicable):					
Level and form of studies: 1st level, full-time					
Kind of subject: optional					
Subject code INZ0283W1					
Group of courses YES					
	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	30		30		
Number of hours of total student workload (CNPS)	80		70		
Form of crediting	Examination		Crediting with grade		
For group of courses mark (X) final course	X				
Number of ECTS points	3		2		
including number of ECTS points for practical (P) classes			2		
including number of ECTS points for direct teacher-student contact (BK) classes	1,8		1,2		

*delete as applicable

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. The student has a basic knowledge of computer systems and completed the course Introduction to Computer Systems.
2. The student has a basic knowledge of operating systems and completed the course Operating Systems.
3. The student has a basic knowledge of computer networks and completed the course Computer Networks and Communications.

SUBJECT OBJECTIVES

- C1. Acquire the basic knowledge and practical skills related to administering of servers.
 C2. Acquire the basic knowledge and practical skills related to administering of network services.

SUBJECT EDUCATIONAL EFFECTS

relating to knowledge:

- PEK_W01 - student has a basic knowledge of the functioning of network operating systems.
 PEK_W02 - student has a basic knowledge of the functioning of network services.

relating to skills:

- PEK_U01 - student has basic skills in the administration of network operating systems.
 PEK_U02 - student has basic skills in the administration of network services.

PROGRAMME CONTENT		
Form of classes - lecture		Number of hours
Lec 1	Introduction into administering. System installation issues.	2
Lec 2	Administering using GUI nad consoles.	2
Lec 3	User and group account management.	2
Lec 4	File system management.	2
Lec 5	Data compression. Backup. Scheduling of administrative tasks.	2
Lec 6	System update and upgrade. Additional software installation and deinstallation using repositories.	2
Lec 7	Printing in network environment. GUI on Linux like systems.	2
Lec 8	Network configuration and software routing.	2
Lec 9	Firewalls and network traffic management.	2
Lec 10	DHCP and DNS servers.	2
Lec 11	File servers.	2
Lec 12	WWW server.	2
Lec 13	Virtualization.	2
Lec 14	System hardening. Remote administration.	2
Lec 15	Content management systems.	2
	Total hours	30
Form of classes - laboratory		Number of hours
Lab 1	Introduction to laboratory.	2
Lab 2	System installation.	2
Lab 3	Text consoles: shells, basic commands, scripts.	2
Lab 4	Practical user and group management.	2
Lab 5	Practical filesystem management.	2
Lab 6	Data compression. Backup. Scheduling of administrative tasks.	2
Lab 7	System update and upgrade. Additional software installation and deinstallation using repositories.	2
Lab 8	Printing configuration. Test – Management of server operating system and user environment.	2
Lab 9	Network connection and software routing configuration.	2
Lab 10	Firewall configuration.	2
Lab 11	DHCP and DNS servers configuration	2
Lab 12	File server configuration.	2
Lab 13	WWW server configuration.	2
Lab 14	Virtualization. Remote administering.	2
Lab 15	Test – Network infrastructure and network services management.	2
	Total hours	30
TEACHING TOOLS USED		
N1. Lecture		
N2. Laboratories with access to server operating systems with administrative privileges.		
N3. Contact hours.		
N4. Student work – Preparation to laboratories.		

N5. Student work – Preparation to Exam.

EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end))	Educational effect number	Way of evaluating educational effect achievement
F1	PEK_U01	Test – Management of server operating system and user environment. (Lab. 8)
F2	PEK_U02	Test – Network infrastructure and network services management. (Lab. 15)
P	PEK_W01, PEK_W02	Examination

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

- [1] Evii Nemeth, Trent R., Hein, Garth Snyder, Ben Whaley: Unix and Linux System Administration Handbook, Published 2011 by Pearson Education.
- [2] Christopher Negus, Christine Bresnahan: Linux Bible, Published 2012 by Wiley.
- [3] William R. Stanek: Windows Server 2012 Pocket Consultant, Published in 2012 by Microsoft Press.

SECONDARY LITERATURE:

- [1] Cricket Liu, Paul Albitz: DNS and BIND, Published June 2nd 2006 by O'Reilly Media.
- [2] William E. Shotts Jr: The Linux Command Line: A Complete Introduction, Published 2012 by No Starch Press.

SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)

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MATRIX OF CORRELATION BETWEEN EDUCATIONAL EFFECTS FOR
SUBJECT
System Administration
AND EDUCATIONAL EFFECTS FOR MAIN FIELD OF STUDY
Computer Science
AND SPECIALIZATION

Subject educational effect	Correlation between subject educational effect and educational effects defined for main field of study and specialization (if applicable)**	Subject objectives***	Programme content***	Teaching tool number***
PEK_W01 (knowledge)	K1INF_W10	C1	Lec 1-7	N1,3,5
PEK_W02	K1INF_W11	C2	Lec 7-15	N1,3,5
PEK_U01 (skills)	K1INF_U14	C1	Lab 1-8	N2,3,4
PEK_U02	K1INF_U08, K1INF_U09	C2	Lab 9-15	N2,3,4

** - enter symbols for main-field-of-study/specialization educational effects

*** - from table above