

1.3. Module/ course form

To be completed by Course Team	Module name : Operating Systems				Module code: M7		
	Course name: Operating Systems				Course code:		
	Faculty: Krzysztof Brzeski Institute of Applied Computer Science						
	Field of study: Informatics						
	Mode of study : Stationary		Learning profile: Practical		Speciality:		
	Year/ semester: 1/2		Module/ course status: Mandatory		Module/ course language: English/Polish		
	Type of classes	lecture	lessons	lab	project	tutorial	other (please specify)
	Course load			30			

Module/ course coordinator	Phd Łukasz Żołędziewski
Lecturer	Phd Łukasz Żołędziewski
Module/ course objectives	<p>Get to know the basics of the Windows operating system works. Acquaint with the capabilities of a Windows 2008 management server. Learning implementation and configuration of DNS and DHCP services, planning and IP subnet configuration and routing configuration of IPsec settings, Windows ® Firewall and Network Access Protection (NAP), event monitoring, and server performance management, file and print servers.</p> <p>Practical:</p> <ul style="list-style-type: none"> - Setting up the infrastructure of Active Directory Domain Services (Domain Services Active Directory) - forests, domains, trusts, locations. - automating creation and maintenance of user accounts, computers, and groups, configure and manage Group Policy.
Entry requirements	basic computer courses from the high school

LEARNING OUTCOME		
Nr	LEARNING OUTCOME DESCRIPTION	Learning outcome reference
1	Have knowledge of the general issues in the field of computer science and information systems	K_W05, K_W08
2	Knows the basic roles and functions implemented in server systems	K_W12
3	Knows the principles and basic standards of security protocols and network	K_W16

4	Designs virtual runtime environment	K_U13
5	Plans and implements the installation of Windows 2008	K_U05
6	Manages system services based on Windows Server 2008	K_U12, K_U13
7	Recognizes the need to permanently improve the level of IT knowledge	K_K01
8	Able to work in a group using social networking tools	K_K07

CURRICULUM CONTENTS	
Lecture	
	not applicable
Tutorial	
	<ol style="list-style-type: none"> 1. Introduction to Managing Microsoft Windows Server 2008 Environmen: Server Roles, Overview of Active Directory, Using Windows Server 2008 Administrative Tools, Using Remote Desktop for Administration 2. Creating Active Directory Domain Services User and Computer Objects: Managing User Accounts, Creating Computer Accounts, Automating AD DS Object Management 3. Creating Groups and Organizational Units: Introduction to AD DS Groups, Managing Group Accounts. Creating Organizational Units 4. Managing Access to Resources in Active Directory Domain Services: Managing Access Overview, Managing NTFS File and Folder Permissions, Assigning Permissions to Shared Resources, Determining Effective Permission 5. Configuring Active Directory Objects and Trusts: Delegating Administrative Access to AD DS Objects, Configuring AD DS Trusts 6. Creating and Configuring Group Policy: Overview of Group Policy, Configuring the Scope of Group Policy Objects, Evaluating the Application of Group Policy Objects, Managing Group Policy Objects, Delegating Administrative Control of Group Policy 7. Configuring User and Computer Environments Using Group Policy: Configuring Group Policy Settings, Configuring Scripts and Folder Redirection Using 8. Fundamentals of Network Infrastructure Network Communication Standards: Physical Network Infrastructure, Logical Network Organization 9. Configuring Basic TCP/IPv4: Overview of the TCP/IP Protocol Suite : Overview of TCP/IP Addressing, Name Resolution, Dynamic IP Addressing, TCP/IPv4 Tools 10. Fundamentals of Securing Network Communication Defense-in-Depth : Securing Access to Web Content, Securing Access to Files, Data Encryption 11. Windows Firewall and Caching Fundamentals: Overview of Perimeter Security, Windows Firewall Overview, Creating Windows Firewall Rules, Monitoring and Troubleshooting Windows Firewall 12. Configuring Print Resources and Printing Pools : Printing Overview, Configuring Network Printers, Using Print Management, Managing Printers 13. Implementing Network Services : Implementing DHCP and DNS Enhancements.

Implementing IP Address Management, Overview of Network Access Protection
 14. Configuring and Troubleshooting Identity and Access Solutions with Windows Server
 2008

Basic literature	William R. Stanek "Windows Server® 2008 Administrators Pocket Consultant", O'Reilly Media, Inc., 29 mar 2010 Dan Holme, Nelson Ruest "MCITP Windows Server® 2008 Server Administrator: Training Kit 3-Pack (2nd Edition)", O'Reilly Media, Inc., 2011
Additional literature	Charlie Russel. Craig Zacker "Introducing Windows Server 2008 R2", Microsoft Press, 2010

Teaching methods	Laboratory and e-learning courses on Adobe Connect platform	
Assessment method		Learning outcome number
Evaluation review		01, 03, 04
Practical colloquium at the computer		02, 05, 06
The project based on e-learning platform		07,08
Form and terms of an exam	Individual work, active participation in laboratory classes; assessment is based on laboratory test results. Scores higher than 72% empower to obtain a certificate of completion from Microsoft.	

STUDENT WORKLOAD	
	Number of hours
Participation in lectures	
Independent study of lecture topics	
Participation in tutorials, labs, projects and seminars	30
Independent preparation for tutorials*	15
Preparation of projects/essays/etc.*	
Preparation/ independent study for exams	10
Participation during consultation hours	5
Other	
TOTAL student workload in hours	60
Number of ECTS credit per course unit	2 ECTS
Number of ECTS credit associated with practical classes	60 2 ECTS
Number of ECTS for classes that require direct participation of professors	35 1,1 ECTS