Title **Computer networks operat.**	Code **1010331461010330650**
Field **Computer Science**	Year / Semester **3 / 6**
Specialty **-**	Course **core**
Hours Lectures: **1** Classes: **-** Laboratory: **1** Projects / seminars: **-**	Number of credits **5**
	Language **polish**

Lecturer:

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Status of the course in the study program:

core

Assumptions and objectives of the course:

Main objective of the course is to provide knowledge on tools and methods for computer network management, configuration and analysis.

Contents of the course (course description):

Lecture
Protocols and tools for network configuration and management. Host configuration with DHCP. Network hardware monitoring and management: management models, management database MIB, SNMP commands. Clock synchronization in computer networks: synchronization models, time sources for computer networks, synchronization network infrastructure, NTP. Domain name system: domain name space, name servers hierarchy, resource records, ENUM system, DNS protocol, modes of operation (iterative, recursive).

Laboratory
(2h) Introduction ? laboratory organization, subjects, assessment methods. Tools (VirtualPC, WireShark etc.). Introduction to Microsoft Windows Server 2008 Standard, including MMC (Microsoft Management Console).
(2h) DHCP - DHCP server instalation and configuration, detailed analysis of protocol messages, address leasing, address pool management, address leasing time management.
(2h) Windows firewall with Advance Security ? firewall traffic management, default configuration analisys, ingress and egress filter rules configuration.
(2h) Remote administration services: Telnet, SSH, remote desktop ? introduction to remote server management problems with a use of protocols and remote desktop, detailed analisys of communication.
(2h) Terminal server ? instalation, configuration and management.
(2h) Active Directory Domain Services ? AD and DNS server instalation and configuration, domain access management
(2h) SNMP protocol and server monitoring ? introduction to network devices monitoring.
(1h) Conlusions

Introductory courses and the required pre-knowledge:

Computer networks

Courses form and teaching methods:

Lecture with multimedia presentation
Laboratory

Form and terms of complete the course - requirements and assessment methods:

Lecture: written examination
Laboratory: evaluation of experiments and reports

Basic Bibliography:

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Additional Bibliography:

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