

SYLLABUS

SUBJECT: NETWORKING TECHNOLOGIES

TEACHER: ROBERT PEKALA, PhD

COURSE DESCRIPTION:

The aim of the course is to introduce students to Ethernet LAN technologies connected with the TCP/IP stack fundamental protocols.

LECTURE:

ISO/OSI model, fundamentals of the Ethernet wired technologies, theory of the internet protocol (IP v4, v6), theory of the TCP protocol, some aspects of the switched Ethernet technology, IP routing basics, implementation of the network security solutions in LAN.

CLASSES:

Practical exercises concerning the preparation of the wired Ethernet connections, IP v4 addressing techniques, IP v6 addressing, Ethernet switches configuring, creating and configuring hybrid networks, internetworking with Ethernet routers, creating and managing extended network topologies, using typical network utilities.

LEARNING OUTCOMES:

Students will acquire a basic theoretical knowledge and practical skills concerning to LAN technologies.

GRADING POLICY:

LECTURE: Written test

CLASSES: Short written test before classes connected with a suitable subject.

TIMETABLE:

Number of hours:

LECTURE: 2h x 15 weeks = 30 hours (1 semester)

CLASSES: 3h x 15 weeks = 45 hours (1 semester)

TEXTBOOK AND REQUIRED MATERIALS:

1. Desmeules R.: Implementing Cisco IP v6 (Sieci oparte na protokole IP v6), Mikom-Cisco Press, 2006. (in Polish).
2. Komar B.: TCP/IP Network Administration (Administracja sieci TCP/IP), Helion 2000. (in Polish).
3. Odom W., Knott T.: Networking Basics CCNA 1, companion guide, Cisco Press 2006.
4. Tanenbaum A.: Computer networks (Sieci komputerowe), Helion 2004. (in Polish).

PREREQUISITES:

High school course in operating systems.