Title	Code
Internetworking	**1018121910108210111**
Field: **Electronics and Telecommunications**	Year / Semester: **5 / 9**
Specialty: **Teleinformatics**	Course: **core**
Hours: Lectures: **2** Classes: **-** Laboratory: **1** Projects / seminars: **2**	Number of credits: **8**
	Language: **polish**

Lecturer:

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Status of the course in the study program:

Obligatory course for students of Electronics and Telecommunications, specialization Teleinformatics.

Assumptions and objectives of the course:

Understanding networking technologies and underlying components. Examination of how networking can satisfy the requirements of emerging information technologies and applications, especially multimedia services.

Contents of the course (course description):

Lectures: Development of the network and multimedia services, especially VoD and videoconferences. The interconnected networks working as information transport networks. The reference model of multimedia networks architecture. ATM technology and its application. QoS mechanisms in ATM networks. IP over ATM. Integration on the basis of IP protocol, transmission performance in packet networks, total delay. VoIP standard. Signaling protocols: SIP, H.323. QoS in IP networks: DiffServe and IntServe models. MPLS technology. Components of MPLS networks: LSR, LER, LDP, LSP, FEC. IP/WDM networks - DPT technique. The convergence networks. Access network architectures: HFC, FITL, xDSL. Service integration in mobile networks - UMTS system. The future of internetworking.

Project: Independent student?s work concerning integration using network operating systems and network components for internetworking.

Laboratory classes: Experiments concerning: MPoA, cooperation between packet networks and ATM, encapsulation techniques in WAN networks, application of ISDN lines in the computer networks, application of frame relay encapsulation in WAN networks.

Introductory courses and the required pre-knowledge:

Basic knowledge of protocols and computer networks taught at Computer networks course.

Courses form and teaching methods:

Lectures supported by multimedia presentations.

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

Individual projects, written exam.

Basic Bibliography:

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Additional Bibliography:

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