

Code .....

Course item: .....

**1. INFORMATION ABOUT THE COURSE****A. Basic information**

Name of course	<b>Computer Networks</b>
Study level	<i>First degree</i>
Unit running the study programme	<i>Faculty of Telecommunication, Computer Science and Electrical Engineering</i>
Study programme	<i>Electronics and Telecommunications</i>
Speciality	
Name of teacher (s) and his academic degree	<i>Łukasz Zabłudowski, Phd</i>
Introductory courses	<i>None</i>
Prerequisites	<i>None</i>

**B. Semester/week schedule of classes**

Semester	Lectures	Classes	Laboratories	Project	Seminars	Field exercises	ECTS
winter or summer	45						4

**2. EFFECTS OF EDUCATION** (acc. to National Qualifications Framework)

Knowledge	<i>After successful completion of the course student is supposed to define IP packet switched networks and TCP/IP network model protocols, discuss the architecture and designing trends, be able to perform network hardware configuration and troubleshoot layer 2 and layer 3 networks.</i>
Skills	<i>After successful completion of the course student is supposed to design a local area network.</i>
Competences	<i>After successful completion of the course student is supposed to be able to design and implement a local area network.</i>

**3. TEACHING METHODS**

<i>multimedia lecture and multimedia presentation</i>
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**4. METHODS OF EXAMINATION**

<i>written exam</i>
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**5. SCOPE**

Lectures	<i>The genesis computer network architectures (OSI, TCP / IP). The physical means of transmission in local area networks - types of transmission media, topologies. Network protocols: logical link control protocols, protocols, medium access control (MAC), protocols, network layer, transport layer protocol, application layer protocols. LAN Technologies: Ethernet, Fast Ethernet, Gigabit Ethernet, 10GigabitEthernet, Tokenring, 100VG – Any LAN, wireless networks. Elements of active networks: network interface card, workstation, file server, bridges, routers, gateways, switches. Configuring the local network: a network equivalent to the provision of resources, network client - server. Structured cabling. The cooperation of local networks - intranets. Network design. Internet and related protocols and services. Design of structural networks. and development of computer networks. A layered model of</i>
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## 6. LITERATURE

Basic literature	<i>Kurose J.F., Ross, K.W., 2009. Computer Networking: A Top - Down Approach. Addison Wesley. Sosinsky B., 2009. Networking Bible. Wiley. Anderson A., Benedetti R., 2009. Head First Networking. O'Reilly Media.</i>
Supplementary literature	<i>Kurose J., 2005. Computer networks: A top down approach featuring the internet. Pearson/Addison Wesley.</i>