				Bial	ystok Univ	versity of	Technology					
Field of study			Com	nputer Scie	ence		Degree level programme t		Engineer's degree full-time programme			
Specialization/ diploma path							Study profi	le	academic			
Course name	Computer Networks									FCS-00026		
course name	Computer Networks Course type									obligatory		
Forms and number of hours	L	С	LC	Р	SW	FW	S	Semester			1	
of tuition	30	<u> </u>	30					No. of ECTS cr	edits		6	
Entry requirements				5), Introduction to Lin				
Course objectives	model. F the netw and conf	Familiarize students with the basic model of data transmission in computer networks and implementations of mechanisms defined in such a model. Presentation of the cross-section of issues relating to computer networks. Gaining knowledge about the problems in the operation of the network and its underlying causes. Knowledge of the principles of operation and use of the basic services available online. Ability to design and configure simple network including network services.										
Course content	transmis Framing mechani of opera technolo Lab: - networ - VLAN c - networ - configu - routing - firewall - web se - design	Network classification. Data transmission model. The concept of a communication protocol. Encapsulating Data Units. Methods of bit transmission. Types and properties of the transmission medium. The concept of physical addressing. Types of concentrators and switches. Framing in Data Link Layer. Physical link access algorithms. Logical addressing and its implementation in IPv4 and IPv6 protocols. Routing mechanisms in IP networks. The general structure of the Internet. Internal and external routing protocols. DNS system: structure and principle of operation. Transport layer and its tasks. Selected application layer protocols. Other layered models. Introduction to wide area network technology. Network packet analysis. Fundamentals of computer network security.										
Teaching methods				problem, I	aboratory e	exercises,	project met	hod,				
Assessment method		es - written te excersises in		and service	- configura	tion						
Symbol of learning outcome		XCersises	I Network -	Ina service.		ation J outcomes	5				o the learning he field of study	
LO1			ie process	of data trar	nsmission i	n the netwo	ork and iden	tifies network mecha	nisms	K_W08		
LO2	within the model knows basic network services and can configure them									K U08		
-					-					-	U08	
L03	can set up a simple network with basic computer network services									_	_K03	
LO4	knows the basic principles of network devices									K_\	W08	
-											U08 during which the	
Symbol of learning outcome		Methods of assessing the learning outcomes									during which the is assessed	
LO1	wirtten tes	·st							İ		L	
L01		est, tasks, gu									, Lc	
L02 L03		in compute		topian							, LC LC	
				Jesiyn								
LO4	WITTENLE	est, tasks, qu	Jiz							∟,	, Lc	
	wirteen te.	·								21		
				workload	(in hours)	I				No. of	f hours	
			Student		(in hours)						f hours	
		lance at lect	Student		(in hours)) 						
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	1 - Attenda 2 - Attenda	lance at lect	Student v tures - 15x sses - 15x2	<2 2	(in hours))				3	f hours	
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Calculation	1 - Attenda 2 - Attenda 3 - Prepara 4 - Perform	lance at lect lance at clas ration for lab mance of pro	Student v tures - 15x sses - 15x2 boratories - rojects task	<2 2 - <s (with="" pres<="" td=""><td>esentation) -</td><td></td><td></td><td></td><td></td><td>3</td><td>f hours 30 30 10</td></s>	esentation) -					3	f hours 30 30 10	
Calculation	1 - Attenda 2 - Attenda 3 - Prepara 4 - Perform 5 - Particip	lance at lect lance at clas ration for lab mance of pro pation in stu	Student of tures - 15x sses - 15x2 boratories - rojects task udent-teach	<2 2 - <s (with="" pres<="" td=""><td>esentation) -</td><td></td><td></td><td></td><td></td><td>3</td><td>f hours 30 30 10 55 5</td></s>	esentation) -					3	f hours 30 30 10 55 5	
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L – lecture, C – classes, LC – laboratory classes, P – project, SW – specialization workshop, FW – field work, S – seminar

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