Óbuda University				Institute for Cyber Physical Systems					
John von Neumann Faculty of Informatics									
Name and code: Network Technologies I. NIXH					'BNE Cre	dits: 4			
Computer Science and Engineering BSc programme 2019/20 year II. semester									
Subject lecturers: Dr. Anna Bánáti, Dr. Eszter Kail									
Prerequisites (with code):		Computer Networks							
Weekly hours: 3	Lecture: 2 Seminar.: 0			Lab. hours: 1	Consultation: 0				
Way of									
assessment:	mid-term tests, orai and laboratory exam								
Course description:									
Goal: To get familiar with LAN and WAN technologies, to plan, configure and manage small-									
to-medium size networks and to implement basic security considerations.									
Course description: The subject introduces the design goals of LAN and WAN networks, the									
typical methods of designing, the best practices of design and operating methods (including the									
systematic design methods e.g. : Cisco hierarchical network design, possibility and benefits of									
simulations, the hardware and software tools and devices of implementing, configuring, fine-									
tuning, troubleshooting, and implementation in practice, the implementation, operation, and									
network management issues of a designed network.									

Lecture schedule							
Education week	Торіс						
1.	Protocols, Layered architecture of communication, Physical layer						
2.	Data-link layer						
3.	Network layer						
4.	Transport layer						
5.	Routing basics						
6.	Advanced routing						
7.	Test						
8.	Basic switching						
9.	Advanced switching						
10.	DHCP						
11.	ACL						
12.	NAT						
13.	Consultation						
14.	Test						
Midterm requirements							

Midterm requirements

	Education week		Topic							
	7.	7. Test 1								
	13.	Test 2								
Final grade calculation methods										
		1 14		1						
	Achieve	ed result	Grade							
	89%-10	0%	excellent (5)							
	76%-88	<%	good (4)							
	63%-75	<%	average (3)							
	51%-62	<%	satisfactory (2)							
	0%-50<	:%	failed (1)							
	1	Tvr	be of exam	1						
Lab activity &	oral examination	- J F								
		Type of	f replacement							
Once on the 1	4th week.									
		Re	eferences							
Mandatory: L	ecture notes, Cisco N	Network Ac	ademy course material							
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Panem 2013	a. Tannenbaum A. S	Compute	T INELWOIKS, Srd Extended e	union, Prem						
Anurag Kumar: D. Maniunath: Joy Kuri: Communication Networking - Analytical approach:										
Elsevier; 2004										
Larry L. Peterson; Bruce S. Davie: Computer networks - a systems approach; Elsevier; 2007										
TCP/IP Tutorial and Technical Overview; IBM; 2006										