# Course description

Course abbreviation:	KIT/ZPS2	morte II				Page:	1/3	
Academic Year:	2020/2021	WOIKS II			Printed:	24.05.2024	19:37	
Department/Unit /	KIT / ZPS2				Academic Year	2020/2021		
Title	Computer Networks II				Type of completion	Examination		
Accredited/Credits	Yes, 4 Cred.				Type of completion	Combined		
Number of hours	Lecture 1 [HRS/WEEK] Tutorial 3 [HRS/WEEK]							
Occ/max	Status A	Status B	Status C		Course credit prior to	YES		
Summer semester	0 / -	0 / -	0 / 8		Counted into average	YES		
Winter semester	0 / -	0 / -	0 / -		Min. (B+C) students	not determ	nined	
Timetable	Yes				Repeated registration	NO		
Language of instruction	English				Semester taught	Summer s	emester	
Optional course	Yes				Internship duration	0		
Evaluation scale	A B C D E F				Ev. sc. – cred.	S N		
No. of hours of on-premise								
Auto acc. of credit	No							
Periodicity	Κ							
Substituted course	KIT/IPS2							
Preclusive courses	N/A							
Prerequisite courses	N/A							
Informally recommended courses		N/A						
Courses depending on this Course		KIT/IPS3, KIT/	ZPS3, KST/IP	S3				

# Course objectives:

Goal of this course is to bring deeper understanding of routing principles, how finding of remote network is done and how to choose the best route under united administration entity, routing algorithms and to acquire related skills. Gained skills are oriented for successful administration of small and medium sized companies.

# Requirements on student

Condition for the granting of credit for this course is successful completion of the second semester e-learning course CCNA (required strength in the final test is 70%), submission of the semester project (successful demonstration of the practical lab) and participation in exercises with expert knowledge. Any non-participation in exercises should be replaced drafting assignment on the substance being discussed in the seminar can be accepted up to 2 absence.

# Content

Introduction to Switched Networks Basic Switching Concepts and Configuration VLANs Routing Concepts Inter-VLAN Routing Static Routing Routing Dynamically Single-Area OSPF Access Control Lists DHCP Network Address Translation for IPv4

# Prerequisites - other information about course preconditions

Prerequisites are successful completion of the course Computer Networks 1 (if the interest exceeds the capacity of the course,

students will be selected according to the prerequisites for a successful accomplishment of this object (for the course Computer Networks 1, experience, knowledge)).

A good assumption is the completed CCNA Routing and Switching: Introduction to Networks (in the case of non-compliance with this requirement may subject the student has enrolled, but will it run its course more difficult (to handle a lot more substance and domestic work, is approximately 50 hours of study more difficult)).

## Competences acquired

After completing this course, students will have theoretical knowledges about architecture, concepts and tasks of switch and routers, deep knowledge about architecture of enterprise networks, and basic management of this networks. Students should be able to apply gained skills for analysis, configurations and validating basic faults and setting in enterprise networks.

#### Fields of study

# Guarantors and lecturers

- Guarantors: Ing. Soňa Neradová, Ph.D. (100%)
- Lecturer: Ing. Soňa Neradová, Ph.D. (100%)
- Tutorial lecturer: Ing. Soňa Neradová, Ph.D. (100%)
- Seminar lecturer: Ing. Soňa Neradová, Ph.D. (100%)

# Literature

• Basic:	Materiály kurzu CCNA-exploration.				
• Further literature:	Jiří Peterka. Archiv materiálů Jiřího Peterky.				
• Further literature:	RNDr. Libor Dostálek. Archiv materiálů RNDr. Libora Dostálka.				
• Further literature:	Dokumenty IEEE.				
• Further literature:	VELTE, T. J. Síťové technologie CISCO- velký průvodce. Brno: Computer Press, 2003.				
• Recommended:	Dokumenty RFC.				
• Recommended:	Mark A. Sportack. Směrování v sítích IP. Brno: Computer Press, 2004. ISBN 80-251-0127-4.				
• Recommended:	Rita Pužmanová. TCP/IP v kostce. Kopp. ISBN 80-7232-236-2.				
• Recommended:	Libor Dostálek. <i>Velký průvodce protokoly TCP/IP a systémem DNS</i> . Praha: Computer Press, 2002. ISBN 80-7226-675-6.				

# Time requirements

All forms of study						
Activities		Time requirements for activity [h]				
Účast na výuce		42				
Příprava na zkoušku		16				
Domácí příprava na výuku		70				
	Total:	128				

#### Teaching methods

Monologic (reading, lecture, briefing) Dialogic (discussion, interview, brainstorming) Monitoring Demonstration Skills training Laboratory work

# Assessment methods

Oral examination Written examination Home assignment evaluation

# Course is included in study programmes: