

NAME OF THE COURSE		Computer networks						
Code	PMIC30	Year of study	GU-1 UGU-2 UGU-3					
Course teacher	prof.dr. sc. Marko Rosić mr. sc. Ante Burilović	Credits (ECTS)	5,0					
Associate teachers	Ivica Andrun dipl. ing.	Type of instruction (number of hours)	L	S	E	F		
			30		30			
Status of the course		Percentage of application of e-learning						
COURSE DESCRIPTION								
Course objectives	The aim of the course is to teach students theoretical and practical basics of computer networks, network protocols, TCP / IP model and LAN architecture. Introduction to basic components such as network devices, media for data transfer and network protocols.							
Course enrolment requirements and entry competences required for the course	No specific preconditions required, no entrance competence required.							
Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	1. describe the basic mechanisms of transmission of information on networks with packet switching 2. describe basic mechanisms of operation and purpose of individual ISO-OSI level 3. demonstrate a particular network technology in practice 4. organize subnet 5. design a simple network							
Course content broken down in detail by weekly class schedule (syllabus)	Lectures (30 hours): • General introduction (Internet, connect to the Internet, ...) - 2 hours • Introduction to computer networks (a division of computer networks, topology) - 2 hours • Network architecture (OSI model and TCP / IP model) - 2 hours • Physical layer (OSI model) - 3 hours • Data link layer (OSI model) - 3 hours • The architecture of the local network (IEEE 802 series of standards) - 6 hours • Network layer (OSI model) - 2 hours • The architecture of the TCP / IP model, network layer in the Internet (IP) - 4 hours • The transport layer (TCP, UDP) - 4 hours • Application layer - 2 hours Exercises (30 hours): • Introduction to Computer Networking - 2 hours • Cables and numbering systems - 2 hours • Commands - 2 hours • Protocols (ARP) - 2 hours • Protocols (IP) - 4 hours • IPv4 addresses - 2 hours • IPv4 settings - 4 hours • IPv4 subnet - 4 hours • IPv4 VLSM - 2 hours • Application of the rules for creating a network - 4 hours • VLSM structure type tree - 2 hours							

Format of instruction	☒ lectures ☐ seminars and workshops ☒ exercises ☐ on line in entirety ☐ partial e-learning ☐ field work			☐ independent assignments ☐ multimedia ☐ laboratory ☐ work with mentor ☐ homework assignments		
Student responsibilities	Completed laboratory exercise and the presence of more than 70% of lectures and auditory exercises are a requirement for the exam.					
Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Name	Ects	Name	Ects	Name	Ects
	Class attendance		Research		Experimental work	
	Oral exam		Report		Homework assignments	
	Seminar essay		Essay			
	Tests	2.5	Practical training			
	Written exam	2.5	Project			
Grading and evaluating student work in class and at the final exam	Acquired knowledge of the student is assessed during the classes and passing exams and / or written exam. The final grade of the student's knowledge is formed in the oral examination as a common rating of student activities in class, grades in additional examinations and assessments written and oral examination. Grades: • sufficient (2), meets the minimum criteria, the knowledge of the outcomes described above is 50% to 60%, min. adopted outcomes are 1. and 2. • good (3), the average success the knowledge of the outcomes described above is 61% to 70%, min. adopted outcomes are 1., 2. and 3. • very good (4), the knowledge of the outcomes described above is 71% to 80%, min. adopted outcomes are 1., 2., 3. and 4. • Excellent (5), the knowledge of the outcomes described above is 81% to 100%, min. adopted outcomes of the 1., 2., 3., 4. and 5.					
Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media	
	A.S.Tanenbaum, "Computer Networks", 5th Ed., Prentice-Hall, 2011			0		
	L.Peterson, B.Davie, "Computer Networks: A Systems Approach", 4th Ed., Morgan Kaufmann Publishers, 2007			0		
	L. Maleš, Skripa "Računalne mreže", Fakultet prirodoslovno-matematičkih znanosti i odgojnih područja, 2004.			0		

Optional literature (at the time of submission of study programme proposal)	
Quality assurance methods that ensure the acquisition of exit competences	• Completed all exercises and presence on more than 70% of lectures and exercises are a requirement for the exam. • During the semester assessment by colloquium is done (2 x theoretical part, and 2 x exercises part)
Other (as the proposer wishes to add)	