Basic data of the subject	
University:	**University of Applied Sciences in Ferizaj**
Academic unit:	**Faculty of Engineering and Informatics**
Program:	**Applied Informatics**
Title of the subject:	**Computer Network Technologies**
Level:	**Bachelor**
Course Status:	**Obligatory**
Year of studies:	**I, Semester I**
Number of hours per week:	**3**
Value of Credits - ECTS:	**5**
Time / location:	
Course lecturer:	
Contact details:	
Course Description:	*This course provides students with deep basics of networking specialization. Students learn functioning of the network protocols, way in which information is transmitted, what the types of networks are, what IP address is made of, structure of sent packets. Students create their own virtual networks using Packet Tracer, learn how to divide network into subnets.*
Objectives of the course:	*Aim of the course - to learn how to create a virtual network model, according to the given requirements, divide network into subnets, assigning dynamic or static IP addresses. It is also taught in the network to find the error using the console.*
Expected learning outcomes:	*Upon successful completion of this course, student will be able to:* • *Connect a small computer network.* • *List the network types and their differences, IP address and data packet structure.* • *Find network errors using the console.* • *Create small network in a virtual environment.* • *Understand how to configure a real network.* • *Self-study using Netacad environment.*
Prerequisites:	*Students should be familiar with the basics of computers and their operations, as well as have the ability to use a computer and understand basic computer networking terminology.*

Contribution to the student load (which must correspond with learning outcomes)			
Activity	**Hour**	**Day/Week**	**In total**
Lectures with numerical exercises	3	15	45
Internship			
Contacts with teacher / consultations			

Field exercises			
Midterm, seminars and projects.	3	2	6
Homework			
Self-learning time student (at the library or at home)	3	15	45
Final preparation for the exam	7	2	14
Time spent on evaluation (tests, quiz and final exam)			
Projects and presentations.	3	5	15
		Total	**125**
Teaching methodology:	*The course takes 15 weeks with 1.5 hours of lectures and 1.5 hours weekly individual and group exercises. Exercises will be held in the form of individual and group work in which concrete examples will be discussed. Active participation is extremely important so students are encouraged to attend lectures and exercises regularly and contribute to the discussions that take place in lectures. Lectures, exercise, individual work, discussions and group work.*		
Assessment methods:	*The student can choose to be assessed one of the two forms of assessment, given below:* *1. Form 1: Evaluation with colloquiums* *2. Form 2: Evaluation with the final exam.* ***Form 1:*** *In the first form of assessment "Assessment with colloquiums" the student is assessed in three activities that are carried out during the lectures:* *1. Colloquium 1 (45%), individual assessment* *2. Colloquium 2 (45%), individual assessment* *3. Class activity (10%), individual assessment* *If the student is not satisfied with the assessment achieved according to form 1, then he can undergo the assessment according to form 2 to obtain a higher assessment.* ***Form 2:*** *Through the final exam, the student can achieve a maximum of 90% of the points from the total of 100 points.* *The rest of the 10% points must be completed by activity carried out during the lectures.* *In Colloquium 1, Colloquium 2 and the final exam, the evaluation of the students will be done through an evaluation form, which must be completed individually*		

	by the student. The evaluation form will contain 5 tasks through which the student's learning outcomes will be evaluated. *Activity in the class means the student's engagement in dealing with the issues discussed in the class, during the lectures.* ***Rating:*** *91-100 points – graded 10 (ten)* *81-90 points – graded 9 (nine)* *71-80 points – grade 8 (eight)* *61-70 points – grade 7 (seven)* *51-60 points – grade 6 (six)* *0-50 points – The student repeats the exam*
The ratio of theory and practice:	*70% theory with numerical exercises and 30% laboratory work.*
Literature	
Basic Literature:	1. *Andrew S. Tanenbaum, David J. Wetherall, (2010), "Computer Networks", Fifth Edition, Publisher: Prentice Hall*
Additional Literature:	2. *W. Odom (2013) Cisco CCENT/CCNA ICND1 100-101. 1758 p. Cisco material in NETACAD system*
Designed learning plan	
Week:	**Lectures and exercises to be held**
Week one:	*Introduction to Networks.*
Week two:	*Networking Types.*
Week three:	*OSI Reference Model.*
Week four:	*TCP/IP Model.*
Week five:	*Ethernet Technologies and Cabling.*
Week six:	*Ethernet Technologies and Cabling (continued)*
Week seven:	*Test 1*
Week eight:	*Cisco 3 Layer Model.*
Week nine:	*Cisco 3 Layer Model (continued)*
Week ten:	*IP Addresses – Composition, Types and Classes.*
Week eleven:	*Private and Public IP addresses.*
Week twelve:	*Subnetting.*
Week thirteen:	*Variable Length Subnet Masks (VLSM).*
Week fourteen:	*Troubleshooting IP Addressing.*
Week fifteen:	*Test 2*
Academic policies and rules of conduct	
Regular attendance of lectures and exercises is necessary, as well as active participation with discussion and solution of tasks. Not impeding the progress required for learning using mobile phones turned off or in silent mode.	