



SYLLABUS

Basic information of the course	
University:	University “Ukshin Hoti” - Prizren
Academic unit:	Faculty of Computer Science
Study program:	Information Technologies and Telecommunication
Course:	Mobile communications concepts
Study level:	Bachelor
Course status:	Mandatory
Study year:	3
Number of hours per week:	2+2
Credit value - ECTS:	6
Time / location:	It will be published in the university web site!
Lecturers:	Ass. Prof. Dr. Arsim Susuri Ass. Endrit Fetahu, Ph. D. c.
Contact details:	arsim.susuri@uni-prizren.com endrit.fetahi@uni-prizren.com
Course description:	This course covers the basics of networking and the internet. The course presents an internal perspective on how networks are built and how they communicate through the TCP / IP stack. Since the course is intended to serve students with experience in Electrical and Computer Engineering, some computer programming skills. Topics covered by OSI and TCP / IP, Ethernet, Routing, IP addressing, TCP / UDP, network protocols, network management and wireless networking.
Course objectives:	The main aim of this course is to provide to the students an introduction for the functioning of the mobile systems, the future functioning, which technology will be the future of wireless local networks as well the impact of the mobility on applications, security and IP networks.
Learning outcomes:	Students will be able to explain the main functions of mobile phone networks, wireless computing networks and the role of mobility in IP networks. Students will understand and compare applications of

	different mobile telecommunication networks for different situations.		
Contribution on student load (must correspond with learning outcomes)			
Activity	Hours	Days/week	Total/hours
Lectures	2	15	30
Exercise theoretical/laboratory	2	15	30
Practice work			
Contact with lecturer/consultations	1	15	15
Field exercises	-	-	-
Midterms	-	-	-
Laboratory exercises	-	-	-
Individual time spent studying (at the library or home)	3	15	45
Final preparation for the exam	2	15	20
Time spent in evaluation (tests, quiz, final exam)	-	-	5
Projects, presentations, etc.	-	-	5
Total			150
Notice: 1 ECTS credits = 25 hours commitment, e.g. if the course has 6 ECTS credits student must have 150 hours during the semester.			
Teaching methods:	The course is a combination of lectures, discussions, numerical and laboratory exercises, while the assignments are presented by the laboratory course lecturers!		
Assessment methods:	<ul style="list-style-type: none"> - Midterm 1: 40%. - Midterm 2: 40%. - Project: 20%. 		
Assessment and grading:	Vlerësimi në %	Nota përfundimtare	
	91% - 100%	10	
	81% - 90%	9	
	71% - 80%	8	
	61% - 70%	7	
	51% - 60%	6	
	0% - 50%	5	
Literature			
Basic literature:	<ol style="list-style-type: none"> 1. Introduction to Mobile Network Engineering: GSM, 3G-WCDMA, LTE and the Road to 5G, Alexander Kukushkin, ISBN: 978-1-119-48419-6, September 2018. 2. 5G Mobile Communications: Concepts and 		

	Technologies, 1st Edition, Saad Asif, ISBN 9781498751551, 2018. 3. Mobile Communications and Networks, Christian Bettstetter.
Additional literature:	1. Jochen H. Schiller, Mobile Communications, Second Edition. Addison-Wesley, 2003.

Study plan	
Week	Lectures
<i>First week:</i>	<ul style="list-style-type: none"> • Introduction to mobile communications concepts
<i>Second week:</i>	<ul style="list-style-type: none"> • Mobile telecommunication applications, market, reference model, etc
<i>Third week:</i>	<ul style="list-style-type: none"> • Wireless transmission, medium access control, SFMA, FDMA, TDMA, CDMA
<i>Fourth week:</i>	<ul style="list-style-type: none"> • Wireless telecommunications systems, GSM
<i>Fifth week:</i>	<ul style="list-style-type: none"> • Wireless telecommunications systems, DECT, TETRA, UMTS, IMT-2000, LTE and 5G
<i>Sixth week:</i>	<ul style="list-style-type: none"> • Satellite systems, GEO, LEO, MEO transmission systems
<i>Seventh week:</i>	<ul style="list-style-type: none"> • Wireless LAN, IEEE 802.11 standards
<i>Eighth week:</i>	<ul style="list-style-type: none"> • First test.
<i>Ninth week:</i>	<ul style="list-style-type: none"> • Wireless LAN, Hyperlan, bluetooth
<i>Tenth week:</i>	<ul style="list-style-type: none"> • Mobile network layer, mobile IP, ad hoc mobile networks
<i>Eleventh week:</i>	<ul style="list-style-type: none"> • Mobile transport layer, Traditional TCP, TCP over mobile networking 2.5/3G
<i>Twelfth week:</i>	<ul style="list-style-type: none"> • Mobility Support, WWW and WAP LTE and 5G networks, concepts and services
<i>Thirteenth week:</i>	<ul style="list-style-type: none"> • Mobility support, i-mode, SyncML, WAP 2.0
<i>Fourteenth week:</i>	<ul style="list-style-type: none"> • Next generation architecture, forecast
<i>Fifteenth week:</i>	<ul style="list-style-type: none"> • Second test

Exercises

Study plan	
Java	Exercises
<i>First week:</i>	<ul style="list-style-type: none"> • Questions and Discussions
<i>Second week:</i>	<ul style="list-style-type: none"> • Questions and Discussions
<i>Third week:</i>	<ul style="list-style-type: none"> • Questions and Discussions
<i>Fourth week:</i>	<ul style="list-style-type: none"> • Questions and Discussions
<i>Fifth week:</i>	<ul style="list-style-type: none"> • Questions and Discussions
<i>Sixth week:</i>	<ul style="list-style-type: none"> • Questions and Discussions

<i>Seventh week:</i>	<ul style="list-style-type: none"> • Questions and Discussions
<i>Eighth week:</i>	<ul style="list-style-type: none"> • Recapitulation of the material covered for first test
<i>Ninth week:</i>	<ul style="list-style-type: none"> • Questions and Discussions
<i>Tenth week:</i>	<ul style="list-style-type: none"> • Questions and Discussions
<i>Eleventh week:</i>	<ul style="list-style-type: none"> • Questions and Discussions
<i>Twelfth week:</i>	<ul style="list-style-type: none"> • Questions and Discussions
<i>Thirteenth week:</i>	<ul style="list-style-type: none"> • Questions and Discussions
<i>Fourteenth week:</i>	<ul style="list-style-type: none"> • Questions and Discussions
<i>Fifteenth week:</i>	<ul style="list-style-type: none"> • Projects and/or homework

Academic policies and rules of conduct
<ul style="list-style-type: none"> • Generally lecture presentations will be made through MS PowerPoint, tables, material usage, computer programs and numeric exercises. • Additional resources (scientific papers, publications, national bulletins, as well as recent discoveries and research) will be provided by professors. • In the absence of the opportunity for practical work to be organized weekly, in cooperation with the management of the university, this activity will be organized on certain days in: organizations, companies, etc. • During each session will be organized the conversation and co-participation with the students! • Students are required to be regular in lectures and exercises! • It will be evaluated when the students collaborate and participate in the lectures and course exercises! • Timely arrival in lectures and exercises is mandatory!