



UNIVERSITETI "UKSHIN HOTI" PRIZREN

FACULTY OF COMPUTER SCIENCE

PROGRAM: Information Technology and Telecommunication - Bosnian

Curriculum - – SYLLABUS

<i>Level of studies</i>	BACHELOR	<i>Program</i>	ICT BOS	<i>Academic year</i>	2018/2019	
<i>SUBJECT</i>	COMPUTER ARCHITECTURE AND OPERATING SYSTEMS					
<i>Year</i>	I	<i>Status Of the subject</i>	Obligatory	<i>Code</i>	<i>ECTS credits</i>	6
<i>Semester</i>	II					
<i>Teaching weeks</i>	15		<i>Hours teaching</i>	<i>Lectures</i>		<i>Exercises</i>
				2	2	
<i>Teaching Methodology</i>	Lectures, exercises, consultations, tests, case studies					
<i>Consultation</i>	One hour before and one hour after the lecture					
<i>The teacher</i>	Prof. Asoc. Emruš Azizović	<i>E-mail:</i>	azizovic.emrus@gmail.com			
		<i>Tel.:</i>	044 337 652			
<i>Assistant</i>	MSc Musa Murati	<i>E-mail:</i>	murati_m1@yahoo.com			
		<i>Tel.:</i>	049 706 101			

Study goal and table of content	Benefits of student
<p>Introducing students to the basics of organizing a computer system in order to study how it works. Basic architecture of objects used in IT systems on an abstract level.</p> <p>Introducing students with basic concepts and concrete solutions of operating systems of modern computers for proper configuration, software maintenance and successful use in designing IT solutions.</p>	<ul style="list-style-type: none"> - They understand general concepts of internal and external interfaces. - Understand the structure of modern digital computers and CPU. - Tasks of operating systems, device management. - Scheduling, competitiveness and synchronization of the process, use and understand the layout concepts. - Implement advanced operating system capabilities. - Understanding, proper use, configuration, and basic software maintenance of the most common operating systems for typical business applications.

Methodology for the implementation of educational topics:			
Lectures consist of classical teaching methods using projector and interaction with students, a student can take a presentation after each lecture from a Web site: www.aemdl.com/ICT/arhitektura_racunara_i_OS			
Conditions for realization of educational topics:			
Projector, Computer Laboratory.			
Ways of assessing of the student (in %) :	Evaluation in%	Final grade	
Presence on lectures	0-5%	percent	grade
Activity	0-5%	91-100%	10 (ten)
Term paper	0-10 %	81-90%	9 (nine)
Test I	0-10 %	71-80%	8 (eight)
Test II	0-10%	61-70%	7 (seven)
Final exam	0-50%	51-60%	6 (six)

Participation in exercises	0-5%	0-50%	5 (five)	
Group work on tasks and case studies	0-5%			
Total	100.00 %			
Obligations of student:				
Lectures		Exercises		
<ul style="list-style-type: none"> - Regularity in lectures - Active participation in discussions during lectures - Seminary work - Participation in the test - Final exam 		<ul style="list-style-type: none"> - Active participation in exercises - Group work in case studies and tasks - Participation in case studies discussions - Active participation in exercises - Group work in case studies and tasks - Participation in case studies discussions 		
Activities				
	Hour/ weeks	Days/Weeks		
Lectures	2	15	30	
Laboratory exercises	1	15	15	
Contacts with teachers / consultations	1	15	15	
Practical work	2	05	10	
Projects, presentations, etc.	5	2	10	
Own study time	2	15	30	
Preparation for final exam	2	15	30	
Time spent in the assessment (tests, final exam, etc.)	1	05	05	
Colloquium and seminar	2	10	20	
Notice: 1 ECTS credits= 30 hour commitment, e.g. if the subject has 6 ECTS credits student must have 180 hours during the semester commitment.		Total load:	180	
Week	Lectures	Hour	Exercises	
	Topic		Topic	
1	Topic: Uvodno predavanje: Uvod u Arhitekturu racunara i OS	2	Exercises: Istorija racunara pre personalnih racunara, hronologija, mehanički kalkulatori.	2
	Literatura: Andrew S. Tanenbaum, Arhitektura i organizacija racunara, Mikro knjiga, Beograd, 2006		Literatura: Scott Mueller, Nadogradnja i popravka PC-ja, CET Computer Equipment and Trade, Beograd, 2003	
2	Topic: Organizacija, struktura, instrukcije Fon Nojmanove mašine. Istorijat razvoja hardvera	2	Exercises: Sastavni delovi PC računara, karakteristike i konstrukcije sistema	2
	Andrew S. Tanenbaum, Arhitektura i organizacija računara, Mikro knjiga, Beograd, 2006 V. Tomašević, 2009, Osnove racunarske tehnike, Singidunum, Beograd		Literatura: Scott Mueller, Nadogradnja i popravka PC-ja, CET Computer Equipment and Trade, Beograd, 2003	
3	Topic: Struktura savremenih digitalnih računara.	2	Exercises: Savremeni računari	2
	Literatura: Andrew S. Tanenbaum, Arhitektura i organizacija računara, Mikro knjiga, Beograd, 2006		Literatura: Scott Mueller, Nadogradnja i popravka PC-ja, CET Computer Equipment and Trade, Beograd, 2003	
4	Topic: Struktura centralnog procesora, ALU jedinica, Registri, Kontrolna jedinica, Upravljačka jedinica	2	Exercises: Vrste mikroprocesora i njihove specifikacije	2
	Literatura: V. Tomašević, 2009, Osnove racunarske tehnike, Singidunum, Beograd		Literatura: Scott Mueller, Nadogradnja i popravka PC-ja, CET Computer Equipment and Trade, Beograd, 2003	
5	Topic: Memorije, Magistrale	2	Exercises : Osnovno o memoriji, ROM, DRAM, skrivena memorija (KEŠ), vrste RAM memorija, moduli, vrste sistemskih magistrala, funkcije, osobine podela	2
	Literatura: Andrew S. Tanenbaum, Arhitektura i organizacija računara, Mikro knjiga, Beograd, 2006 V. Tomašević, 2009, Osnove racunarske tehnike, Singidunum, Beograd, 2009		Literatura: Scott Mueller, Nadogradnja i popravka PC-ja, CET Computer Equipment and Trade, Beograd, 2003	
6	Topic: Periferni uređaji računarskih sistema	2	Exercises: Hardverske komponente	2

	Literatura: Andrew S. Tanenbaum, Arhitektura i organizacija računara, Mikro knjiga, Beograd, 2006		Literatura: Scott Mueller, Nadogradnja i popravka PC-ja, CET Computer Equipment and Trade, Beograd, 2003	
7	Topic: I kolokvijum	2	Exercises: Instaliranje i konfigurisanje fizičkih uređaja.	2
	Literatura: Andrew S. Tanenbaum, Arhitektura i organizacija računara, Mikro knjiga, Beograd, 2006 V. Tomašević, 2009, Osnove računarske tehnike, Singidunum, Beograd		Literatura: Scott Mueller, Nadogradnja i popravka PC-ja, CET Computer Equipment and Trade, Beograd, 2003.	
8	Topic: Uvod u operativne sisteme. Istorijat operativnih sistema	2	Exercises: Pregled operativnog sistema	2
	Literatura: R. Popovic, I. Branovic, M. Šarac Operativni sistemi, Univerzitet Singidunum, 2011.		Literatura: William Stallings, Operativni sistemi: Principi unutrašnje organizacije i dizajna,,CET Beograd, 2007.	
9	Topic: Vrste operativnih sistema. Struktura OS	2	Exercises: Instaliranje i praktična primena virtuelnih mašina	2
	Literatura: R. Popovic, I. Branovic, M. Šarac Operativni sistemi, Univerzitet Singidunum, 2011.		Literatura: R. Popović, I. Branović, M. Šarac Operativni sistemi, Univerzitet Singidunum, 2011.	
10	Topic: Jezgro operativnih sistema i upravljanje procesima. Upravljanje memorijom.	2	Exercises: Operativni sistemi sa komandnom linijom, DOS - Disk Operating System,	2
	Literatura: B. Đorđević, D. Pleskonjić, n. Maček. Operativni sistemi, teorija, praksa i rešeni zadaci. Mikro knjiga, Beograd, 2005		Literatura: R. Popović, I. Branović, M. Šarac Operativni sistemi, Univerzitet Singidunum, 2011.	
11	Topic: Os Windows .Virtualna memorija. Upravljanje informacijama - File sistemi	2	Exercises: Instaliranje virtuelnog operativnog sistema Windows 7.	2
	Literatura: B. Đorđević, D. Pleskonjić, n. Maček. Operativni sistemi, teorija, praksa i rešeni zadaci. Mikro knjiga, Beograd, 2005		Literatura: R. Popović, I. Branović, M. Šarac Operativni sistemi, Univerzitet Singidunum, 2011.	
12	Topic: Upravljanje uređajima. Ulazno izlazni sistem. Zastita i bezbednost	2	Exercises: Opcije za administriranje operativnog sistema Windows 7	2
	Literatura: R. Popovic, I. Branovic, M. Šarac Operativni sistemi, Univerzitet Singidunum, 2011.		Literatura: R. Popović, I. Branović, M. Šarac Operativni sistemi, Univerzitet Singidunum, 2011.	
13	Topic: Savremeni operativni sistemi. OS Linux. Solaris	2	Exercises: Instaliranje virtuelnog operativnog sistema Ubuntu.	2
	Literatura: B. Đorđević, D. Pleskonjić, n. Maček. Operativni sistemi, teorija, praksa i rešeni zadaci. Mikro knjiga, Beograd, 2005		Literatura: R. Popović, I. Branović, M. Šarac Operativni sistemi, Univerzitet Singidunum, 2011.	
14	Topic: Windows vs Linux	2	Exercises: Distribucije Linuxa, Debian Backtrack.	2
	Literatura: B. Đorđević, D. Pleskonjić, n. Maček. Operativni sistemi, teorija, praksa i rešeni zadaci. Mikro knjiga, Beograd, 2005		Literatura: R. Popović, I. Branović, M. Šarac Operativni sistemi, Univerzitet Singidunum, 2011.	
15	Topic: Distribuirani sistemi.	2	Exercises: Instaliranje operativnog sistema FreeBSD.	2
	Literatura: B. Đorđević, D. Pleskonjić, n. Maček. Operativni sistemi, teorija, praksa i rešeni zadaci. Mikro knjiga, Beograd, 2005.		Literatura: R. Popović, I. Branović, M. Šarac Operativni sistemi, Univerzitet Singidunum, 2011.	

LITERATURE:

Basic Literature:

1. Andrew S. Tanenbaum, Arhitektura i organizacija računara, Mikro knjiga, Beograd, 2006.
2. V. Tomašević, Osnove računarske tehnike, Singidunum, Beograd, 2009
3. B. Đorđević, D. Pleskonjić, n. Maček. Operativni sistemi, teorija, praksa i rešeni zadaci. Mikro knjiga, Beograd, 2005
4. R. Popovic, I. Branovic, M. Šarac Operativni sistemi, Univerzitet Singidunum, 2011.

Additional Literature :

5. Silberschatz A., Galvin P. B., Gagne G., Operating System Concepts, John Wiley & Sons, Inc., 7th edition, 2005.
6. Tanenbaum A. S., Modern Operating Systems, Prentice Hall, 3rd edition, 2007.

NOTICE:

For each subject, students will be equipped with the necessary materials in Bosnian. At the end of each lesson, certain groups of students will deal with the assignment or case studies on the subject of the lecture. The results obtained from this task should be presented and discussed by the student group at the time of the exercise.

Notice for the student:

First of all, the student must be aware of and respect the school's institution and rules; Must observe the schedule of lectures, exercises and term papers, be attentive to the lesson; The possession and presentation of the test and examination index is obligatory; During the preparation of midterm papers, the student must adhere to the instructions given by the teacher for conducting the research and technical work; Tests and exams are assessed individually for each student. Therefore, students should focus only on personal knowledge. The eventual violation of these ethical principles (rules) is punished according to the norms provided by law.