



UNIVERSITETI "KADRI ZEKA" UNIVERSITY

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SYLLABUS

Course: Computer Systems

Basic information of the course	
Academic unit:	FAS
Course Title:	Computer Systems
Level:	Bachelor
Program:	Mathematic Education
Course status:	Elective
Academic year:	2019/2020
Year of study:	Year II, Semester III
Number of hours per week:	3+2
Credits – ECTS:	5 ECTS
Timer / Location:	
Professor of subject:	Prof. Ass. Dr.
Contact details:	
Description, Objectives and expected results	
Course description:	This course provides basic understanding of distributed systems and systems, the need for their construction, functionality, facilities in these systems, guidance to them, the use of computer network layers and the functions of these layers, the use of network protocols, algorithms routing, simulations, access to data and resources, optimization, system programming, grid and cloud computing
Objectives of the course:	<ul style="list-style-type: none"> • To get basic knowledge from the field of distributed systems • To understand the functionality of computer networks • Inter-processor communication algorithms and parallel design features • Parallel programming and processing • To learn programming with p Threads, OpenMP, CUDA and MPI • Understand the Grid and Cloud Concept • Understand and realize future trends
Expected learning outcomes:	<p>Knowledge and understanding: The course focuses on the basic concepts of parallel and distributed systems, their classification, different levels of parallelism, applications, programming, and the basics of parallel design algorithms.</p> <p>application: Students with this course will understand that in the future the creation and use of scattered systems will be indispensable.</p> <p>Reflection:</p>

	Awareness and understanding of the relationship between the theory and the implementation of distributed systems.												
Student contribution													
Activity	Hours	Day / Week	Total										
Lectures	2	15	30										
Theoretical exercises / laboratory	2	15	30										
Contacts with teacher / consultations	1	15	15										
Colloquiums, seminars	2	2	6										
Homework	1	15	15										
Self-learning time student (at the library or at home)	2	15	30										
Final preparation for the exam	5	15	5										
Projects, seminars, presentations, etc.	5	2	10										
Total			141:25 ≈5										
141:25 ≈5 ECTS													
Teaching methodology and assessment methods													
Teaching methodology:	Regular lessons, lectures, consultations, discussions, individual independent work, term papers (homework), presentations.												
Methods of assessment:	<p>The exam consists of a written part and the oral part. The assessment is based on the following activities: Participation and engagement in hours (10%) (Koll.) Test 1-35% (written examination) (Koll.) Test 2-35% (written examination) Seminar papers (individual independent work) - 20% Final exam: 70% (for those who do not pass colloquiums). Points Score</p> <table> <tr> <td>91-100</td> <td>10</td> </tr> <tr> <td>81-90</td> <td>9</td> </tr> <tr> <td>71-80</td> <td>8</td> </tr> <tr> <td>61-70</td> <td>7</td> </tr> <tr> <td>51-60</td> <td>6</td> </tr> </table>			91-100	10	81-90	9	71-80	8	61-70	7	51-60	6
91-100	10												
81-90	9												
71-80	8												
61-70	7												
51-60	6												
Literature													
Base literature:	<ul style="list-style-type: none"> • P.S. Pacheco. An Introduction to Parallel Programming, Morgan Kaufman. Amsterdam, 2011. • M. J. Quinn. Parallel Programming in C with MPI and OpenMP. Mc Graw Hill, New York, 2003. • Jason Sanders, Edward Kandrot. CUDA by Example: An Introduction to General-Purpose GPU Programming. Addison-Wesley, 2010. • 4. Endry Tanenbaum, Computer networks, New Jersey, 2003 • Marjan Gushev, Koncepti za internet, Shkup, 2001 • Edmond Beqiri, Interneti dhe komunikimet kompjuterike, Prishtinë, 2002 • Basri Ahmedi, Selami Klaiqi, Sisteme të shpërndara, Skriptë, UKZ, 2018 												
Designed teaching plan:													
Week	The lecture to be held												
<i>I - week :</i>	What are distributed systems												
<i>II - week :</i>	Identification of object in system												
<i>III - week :</i>	Lead of object												

<i>IV - week :</i>	Use layers and functions of the OSI and TCP / IP models for distributed systems
<i>V - week:</i>	Basic differences in OSI and TCP / IP
<i>VI- week</i>	Package travel from one host to another
<i>VII-week</i>	Applications used by distributed systems
<i>VIII-week</i>	First colloquium
<i>IX-week</i>	File Transfer Protocol- FTP
<i>X-week</i>	Hypertext Transfer Protocol -HTTP
<i>XI-week</i>	Packet routing algorithms
<i>XII-week</i>	Programming for distributed systems
<i>XIII-week</i>	The most consumed applications in distributed systems
<i>XIV-week</i>	Cloud computing the challenge of the future
<i>XV-week</i>	Second colloquium
Academic policies and rules of etiquette:	
<p>Regular attendance of students assessed with 10 points,</p> <ul style="list-style-type: none"> - Students are free to ask questions and active participation in all teaching activity. - They are not allowed cell phones, late arrival or departure from the class without reason. - Plagiarism and copying in exams are penalized under the statute and other regulations of the university. - The Code of conduct applies to both students and teachers. 	