



UNIVERSITETI "KADRI ZEKA" UNIVERSITY

Zija Shemsiu, 60000, Gjilan, Kosovë
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SYLLABUS

Course: Discrete Mathematics

Basic information of the course			
Academic unit:	FAS		
Course Title:	Discrete Mathematics		
Level:	Bachelor		
Program:	Mathematic Education		
Course status:	Electiv		
Academic year:	2019/2020		
Year of study:	Year II, Semester IV		
Number of hours per week:	2+2		
Credits – ECTS:	7 ECTS		
Timer / Location:			
Professor of subject:	Prof. Ass. Dr.		
Contact details:			
Description, Objectives and expected results			
Course description:	<i>Contents of the course include: Special Sequences; Some special classes of matrix; Combinatoric configurations;</i>		
Objectives of the course:	<p><i>Discrete Mathematics</i> aims to integrate training of professionals in the field of science mathematics education bachelor studies.</p> <p>The course objective is to acquaint students with the basics of knowledge in <i>Discrete Mathematics</i>. Another goal is to develop the skills and abilities of students so that they successfully solve concrete problems in field of mathematics whenever required implementation <i>Discrete Mathematics</i>.</p>		
Expected learning outcomes:	<p>After successful completion of the course <i>Discrete Mathematics</i>, students will be able to:</p> <ul style="list-style-type: none"> • To implement knowledge about, Special Sequences and in solving various problems in discrete mathematics and generally in mathematics. • recognize the concept and understanding of, Meaning of Some special classes of matrix. • recognize and understanding Combinatoric configurations. 		
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	3	2	6
Homework	1	15	15
Self-learning time student (at the library or at home)	1	15	15
Final preparation for the exam	2	15	30
Projects, seminars, presentations, etc.	3	3	9
Total			150

150:25≈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 1-40% (written examination) (Koll.) Test 2-40% (written examination) Seminar papers (individual independent work) - 10% Final exam: 80% (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
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81-90	9										
71-80	8										
61-70	7										
51-60	6										

Literature

Base literature:	<ul style="list-style-type: none"> • Dr.Sc. Qefsere Doko Gjonbalaj-Prishtinë 2011. Matematika III drejtimi kompjuterikës. • Matematika diskrete me 300 detyra te zgjidhura, Islam Shehu; Naim L. Braha, 2012. • James Aspnes, Notes on Discrete Mathematics, 2018. • Vasillaq Kedhi, Tiranë 2000, Grafet dhe rrjedhat në grafe.
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Designed teaching plan:

Week	The lecture to be held
<i>I - week :</i>	Generic function. Recuquerent sequences.
<i>II - week :</i>	Numbers of: Stirlingov - the second and first type, Belov,
<i>III - week :</i>	Numbers of: Euler, Bernul, Kosiu. Convex sequences.
<i>IV - week :</i>	Congruence classes, perfect differences of sets.
<i>V - week:</i>	Matrix:Binary, Hadamar, Stochastic.
<i>VI - week</i>	Permutational matrices.
<i>VII-week</i>	The first colloquium.
<i>VIII-week</i>	Permanent matrices.
<i>IX-week</i>	Combinational Configurations. Examples.
<i>X-week</i>	Block schemes. Examples.
<i>XI-week</i>	Unstructured incomplete block schemes.
<i>XII-week</i>	Steiner system.
<i>XIII-week</i>	Symmetric block schemes.
<i>XIV-week</i>	Formation of block schemes

<i>XV-week</i>	The second colloquium.
Academic policies and rules of etiquette:	
Regular attendance of students assessed with 10 points, - 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.	