

Program		Type of studies (cycle)	Third cycle		
		Name of the program	SEE Doctoral Studies in Mathematical Sciences		
Course					
Course title		Combinatorics			
Course code	Semester	Course status	ECTS credits	Contact hours	
	III		10	30	
Teaching staff	Teacher	Prof. Dr. Amela Muratović-Ribić			
	Other staff				
Course goals	Goal is to give wide knowledge of combinatorics to student so they can choose topics for their future research and use their knowledge in future.				
Course content/topics					
<ul style="list-style-type: none"> • Graph colouring and Ramsey theorem, Turans theorem i extremal graphs • 2. systems of distinct representatives • De Brujin sequences • (0,1) problems and matrices • Permanents • Van der Waerdenova conjecture • Partitions • Latin squares, Hadamard matrices, • Designs, Projectiv i combinatorial geometries, Association schemes • Difference sets and automorphisms • Polya theory of counting • Algebraic techniques in graph theory 					
LITERATURE		Grading			
1. A Course in Combinatorics, Lint, Wilson, Cambridge, 2001 2. Enumerative Combinatorics, Stanley, R.P., Cambridge Studies in Advanced Mathematics, 2001 3. Combinatorial Theory, Aigner., Springer, 1997			Criterion	Points	Cut-off points
		1.	Homework assignment	30	17
		2.	Project	20	13
		3	Final exam	50	25
		Total			100