

Study program		Level of studies		Third cycle	
		Title of the study program		Science and mathematics education	
<b>COURSE</b>					
Course title		<b>Selected chapters of geometry</b>			
Course ID	Semester	Course status	ECTS credits	Contact hours	
PMAT 601	I	Elective	7	60	
Lecturers	Lecturer in charge				
	Other lecturers				
Course aims					
<b>CONTENT</b>					
#	Teaching units	Contact hours			
		L	E/S	C	
	<p>Finite structures with incidence axioms; Mappings with keep incidence; Incidence matrixes: Geometry of finite vector spaces; Projective and affine planes; Combinatorics of the finite planes; Projectivity; Cholineation groups; Central cholineations; Construction of the finite planes; Algebraic representations; About non-euclidean geometries;</p> <p>The non-euclidean theory of parallel lines, lines and planes in the space of Lobachevsky. Elementary geometry on the surfaces of Lobachevsky's space; Basic Tasks axiomatics, evidence of inconceivability of Lobachevski geometry and geometry Euclid; The completeness of Hilbert's axiom system; Analytical methods in the basics of geometry; The main equations of the metric geometry of Lobachevsky; Analytical geometry in plane of Lobachevsky; Metric form line of Lobachevsky;</p> <p>Poincaré's model of hyperbolic geometry; Introduction; Inversion; Description Poincaré model; Axioms of incidences and axioms of the order in Poincaré's model; Axiom matches; Axioms of continuity and axioms of parallelity;</p>	30	30		
<b>LITERATURE</b>		<b>ASSESSMENT OF LEARNING</b>			
<p>[1] M.: Pregled istorije i filozofije matematike, Zavod za udžbenike i nastavna sredstva, Beograd 2002.</p> <p>[2] Jefimov, N. N.: Viša geometrija, "Nauka", Moskva 1978.</p> <p>[3] Prvanović, M.: Osnovi geometrije, "Građevinska knjiga", Beograd 1987.</p> <p>[4] Karteszi, Introduction to finite geometries, North-Holland, 1976.</p> <p>[5] P. Dembowski, Finite geometries, SpringerVerlag, 1997.</p>		Assessment method	Points	Threshold	
		1.	Partial exams	25	15
		2.	Seminar papers	25	10
		3.	Final exam	50	30
		4.			
		Total	100	55	