Program	Level		First cycle		
	Name of the program		Pure Mathematics, Mathematics Education, Mathematics and Informatics Education		

COURSE

Course title	**Geometry II**				
Course code	Semester	Course status		ECTS	Contact hours (L+AE+LE)
PMAT330	V	Mandatory/ Elective course		5	2+2+0
Lecturer					
Course Goals	Achieving basic knowledge from two and three-dimensional Euclidean geometry and similarity in the Euclidean plane, the power of a point with respect to a circle and inversion in a circle. Developing geometrical intuition and preparation for more advanced geometry courses.				
Learning Outcomes	At the end of this course, students will be able to understand basic terms from Euclidean geometry of plane and space. Students will know fundamental geometry theorems as well as knowledge of basic geometrical constructions. Students will be able to understand examples and solve tasks and problems by using basic techniques.				

COURSE CONTENT

- Pointsts and lines connected with triangle
- The five Platonic solids. Euler's formula.
- Homothety and similarity in the Euclidean plane ad space. Pythagorean theorem
- The power of a point with respect to a circle.
- Golden ratio and regular pentagon and dodecahedron.
- Inversion in a circle
- A short history of geometry

LITERATURE

[1] Zoran Lučić, Euklidska i hiperbolička geometrija, Total design i Matematički fakultet, Beograd, 1997.

[2] M. Malenica, L. Smajlović, Potencija tačke u odnosu na kružnicu, inverzija I primjene, , Prirodno-matematički fakultet Sarajevo, 2006.

[3] Marcel Berger, Geometry Revealed, Springer-Verlag, 2010

[4] Judith N. Cederberg, A Course in Modern Geometries, Springer-Verlag, Second edition, 2005

[5] S. Mintaković, Zbirka zadataka iz planimetrije, Zavod za izdavanje udžbenika Sarajevo

STUDENT WORKLOAD (hours in a semester)

Lectures	30	Exercises	30	Individual work	65	T o t a l	125

GRADING			REMARKS	
Criterion	Maximum points	Minimum points		
Midterm exams	50	25		
Seminarski rad	20	10		
Final exam	30	20		
T o t a l	100	55		