UNIVERSITETI "KADRI ZEKA" UNIVERSITY

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SYLLABUS

Course: **Elementary geometry**

Basic information of the course	
Academic unit:	**FAS**
Course Title:	**Elementary geometry**
Level:	**Bachelor**
Program:	**Mathematic Education**
Course status:	**Obligatory**
Academic year:	**2019/2020**
Year of study:	**Year III, Semester V**
Number of hours per week:	**3+3**
Credits – ECTS:	**7 ECTS**
Timer / Location:	
Professor of subject:	**Prof. Ass. Dr.**
Contact details:	
Description, Objectives and expected resultes	
Course description:	**Contents of the course Elemental geometry includes: axioms of incidence etc; congruency; construction of figures in the plan; isometric transformations; similarity; inversion.**
Objectives of the course:	**Elementary geometry aims to integrate training of professionals in the field of mathematics education bachelor studies.** **The course objective is to acquaint students with the basics of knowledge in Elementary geometry. 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 Elementary geometry.**
Expected learning outcomes:	**After the successful completion of Elementary Geometry student will be able to:** **• To be familiar with the construction of Euclidean geometry and from these knowledges they are able to solve various problems.** **• Recognize and understand with congruence and construct plane figures.** **• Recognize and understand isometric transformations and similarity.** **• Recognize and understand the inversion.**

Student contribution			
Activity	**Hours**	**Day / Week**	**Total**
Lectures	3	15	45
Theoretical exercises / laboratory	2	15	45
Contacts with teacher / consultations	1	15	15

Collocfiums, 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	1	9
Total			**180**
180:25≈7 ECTS.			

Teaching methodology and assessment methods	
Teaching methodology:	Regular lessons, lectures, consultations, discussions, individual independent work, term papers (homework), presentations.
Methods of assessment:	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 colloquium). Points Score 91-100 10 81-90 9 71-80 8 61-70 7 51-60 6
Literature	
Base literature:	• **Ligjerata të autorizuara nga profesori, Gjilan. 2019.** • **H. S. M. Coxeter, The real projective plane, Springer 1993** • **R. Rosenbaum, Introduction to projective geometry and modern algebra, Addison-Wesley 1963** • **F. Ayres, Schaum's Outline of Theory and Problems of Projective Geometry, McGraw-Hill, 1967**
Designed teaching plan:	
Week	The lecture to be held
I - week :	**Euclidean Geometry. The basic concepts of geometry in plan (points and straight lines). The axioms of: incidence, order, congruence,**
II - week :	**The axioms of continuity, parallelism (Plejfer's axioma)**
III - week:	**Congruence (Isometric Transformations, Relationship of Figure Congruence, Segment Congruence, Congruence of Angels, Congruence Triangles)**
IV - week :	**Angles on the transversal. (The sum of angles in the triangle. Triangle inequalities. Rectangle. Parallelogram. The characteristic points of triangle.)**
V - week:	**Application of congruence in circle. Central angle and peripheric angle. Tangential rectangle etc.**
VI- week	**Construction of figures in plane.**
VII-week	**The first colloquium**
VIII-week	**Isometric transformation (direct and indirect isometric transformations etc),**

IX-week	**Isometric transformation (central rotation, central symmetry, translation etc.)**
X-week	**Similarity (thales theorem, homothety, transformation of similarity etc)**
XI-week	**Similarity (Apollonius's circle, some characteristic theorems. Etc.)**
XII-week	**Definition and properties of inversion.**
XIII-week	**Apollonius's problem.**
XIV-week	**Example and problems about inversion.**
XV-week	**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.**	