EUCLIDIAN GEOMETRY

1	Course Title:	EUCLIDIAN GEOMETRY	
2	Course Code:	İMÖ1008	
3	Type of Course:	Compulsory	
4	Level of Course:	First Cycle	
5	Year of Study:	1	
6	Semester:	2	
7	ECTS Credits Allocated:	5.00	
8	Theoretical (hour/week):	3.00	
9	Practice (hour/week):	0.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:	None	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Prof. Dr. MENEKŞE SEDEN TAPAN BROUTIN	
15	Course Lecturers:	Prof.Dr. Menekşe Seden TAPAN BROUTIN	
16	Contact information of the Course Coordinator:	Prof.Dr. Menekşe Seden TAPAN BROUTIN tapan@uludag.edu.tr 0 224 2955021 Uludağ Üniversitesi Eğitim Fakültesi, A Blok, Matematik ve Fen Bilimleri Eğitimi Bölümü, 16059 Nilüfer,Bursa	
17	Website:		
18	Objective of the Course:	To examine Euclidean geometry with its entire axiomatic structure and to understand the properties of plane shapes in detail.	
19	Contribution of the Course to Professional Development:	To examine Euclidean geometry with its entire axiomatic structure and to understand the properties of plane shapes in detail.	
20	Learning Outcomes:		
		1	Explains the historical development of Euclidean and non-Euclidean geometries
		2	Describes the axiomatic structure of geometry
		3	Explains concepts of defined and undefined terms, axiom and theorem
		4	Read the geometry book written by Ataturk and understand its content and its importance
		5	Formulates basic axioms of Euclidean geometry and use them in proofs
		6	Comments geometric concepts with a deductive point of view
		7	Formulates sufficient and complete definitions for the concepts of triangle, rectangle and polygon and make modulation between these definitions and geometric properties
		8	Realises basic geometric drawings with ruler and compass and make detailed explanations for these drawings
		9	Defines the concepts of the circle and disk, proove theorems about the angle and length
		10	Formulates properties of objects in space, areas and volumes of solids
21	Course Content:		
	Course Content:		

Week	Theoretical	Practice
1	Euclidean and non-Euclidean geometries' historical development. Axiomatic structure of geometry, concepts of defined and undefined terms, axioms and theorems	
2	Review of the geometry book written by Atatürk. Combination axioms and relation and theorems and proofs related to the subject.	
3	Order axioms and relation and theorems and proofs related to the subject. Cantor's continuity axiom.	
4	Congruence axioms and relations for segments. Construction of segments, equilateral triangles using only compass and unitless ruler	
5	Concept of angle. Congruence axioms and relations for angles; theorems and proofs related to the subject. Construction of angles using only compass and unitless ruler.	
6	Concept of triangle. Congruence axioms and relations for triangles; theorems and proofs related to the subject. Construction of triangles using only compass and unitless ruler.	
7	Matching and equality in triangles. SAS definition, ASA, SSS, SAA, SSAA* theorems and their proofs	
8	Triangle drawings from given edges, angles or auxiliary elements with the only help of ruler and compass. Triangle inequality. SAS inequality and inclined line theorems and their proofs.	
9	Circle-line relations in the plane. Positions of two circles to each other and their drawings with the only help of compass and ruler.	
10	Parallels axioms and relation and theorems and proofs related to the subject.	
11	Drawings of paralll lines on a plane	
12	Euclid's parallelism axiom. discussions related with this axiom.Hilbert's parallelism axiom. Playfair axiom, isoparallelism axiom and transition to non-euclidean geometries.	
13	The concept of complete and sufficient definition. Examining complete and sufficient definitions of the concepts of triangle, quadrilateral, polygon and making transitions between these definitions and geometric properties.	
14	The concept of complete and sufficient definition. Examining complete and sufficient definitions of the concepts of triangle, quadrilateral, polygon and making transitions between these definitions and geometric properties.	
22	Textbooks, References and/or Other Materials:	1. ATATÜRK M.K. (1937) Geometri, Türk Dil Kurumu Yayınları, Ankara 2. STAKKESTAD J.M., WYANT L. (1986) Introduction to Geometry, Academic Press, Orlando. 3. Tapan-Broutin, M.S. (2010) Bilgisayar Etkileşimli Geometri Öğretimi, Ezgi Kitabevi Yayınları 4. Lecturer notes
23	Assesment	

TERM LEARNING ACTIVITIES	NUMBER	WEIGHT
Midterm Exam	0	0.00
Quiz	0	0.00
Home work-project	5	40.00
Final Exam	1	60.00
Total	6	100.00
Contribution of Term (Year) Learning Activities to Success Grade		40.00
Contribution of Final Exam to Success Grade		60.00
Total		100.00
Measurement and Evaluation Techniques Used in the Course		Exams, assignments, in-class participation

24 ECTS / WORK LOAD TABLE

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	3.00	42.00
Practicals/Labs	0	0.00	0.00
Self study and preperation	10	8.00	80.00
Homeworks	0	0.00	0.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	0	12.00	0.00
Others	0	0.00	0.00
Final Exams	1	16.00	16.00
Total Work Load			150.00
Total work load/ 30 hr			5.00
ECTS Credit of the Course			5.00

25 CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS

	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	PQ11	PQ12	PQ13	PQ14	PQ15	PQ16
ÖK1	4	4	5	4	5	4	5	5	5	5	3	5	4	5	4	5
ÖK2	5	4	5	4	5	4	5	4	4	5	5	4	4	5	5	4
ÖK3	5	4	5	4	5	5	4	5	4	4	4	4	5	4	5	5
ÖK4	5	5	4	5	4	5	4	5	5	4	4	5	5	4	5	5
ÖK5	5	5	4	5	4	4	5	4	4	5	5	5	4	4	4	4
ÖK6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

ÖK9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

LO: Learning Objectives PQ: Program Qualifications

Contribution Level:	**1 very low**	**2 low**	**3 Medium**	**4 High**	**5 Very High**