

# GEOMETRY

<b>1</b>	Course Title:	GEOMETRY	
<b>2</b>	Course Code:	MAT1004	
<b>3</b>	Type of Course:	Compulsory	
<b>4</b>	Level of Course:	First Cycle	
<b>5</b>	Year of Study:	1	
<b>6</b>	Semester:	2	
<b>7</b>	ECTS Credits Allocated:	4.00	
<b>8</b>	Theoretical (hour/week):	3.00	
<b>9</b>	Practice (hour/week):	0.00	
<b>10</b>	Laboratory (hour/week):	0	
<b>11</b>	Prerequisites:	None	
<b>12</b>	Language:	Turkish	
<b>13</b>	Mode of Delivery:	Face to face	
<b>14</b>	Course Coordinator:	Doç. Dr. MENEKŞE SEDEN TAPAN BROUTIN	
<b>15</b>	Course Lecturers:		
<b>16</b>	Contact information of the Course Coordinator:	Y.Doç.Dr. Menekşe Seden TAPAN BROUTIN tapan@uludag.edu.tr 0 224 2942162 Uludağ Üniversitesi Eğitim Fakültesi, A Blok, İlköğretim Bölümü, 16059 Nilüfer,Bursa	
<b>17</b>	Website:		
<b>18</b>	Objective of the Course:	Studying Euclidean geometry thorough all its axiomatic structure and conceptualizing the properties of plane figures.	
<b>19</b>	Contribution of the Course to Professional Development:		
<b>20</b>	Learning Outcomes:		
		<b>1</b>	Explains the historical development of Euclidean and non-Euclidean geometries
		<b>2</b>	Describes the axiomatic structure of geometry
		<b>3</b>	Explains concepts of defined and undefined terms, axiom and theorem
		<b>4</b>	Read the geometry book written by Ataturk and understand its content and its importance
		<b>5</b>	Formulates basic axioms of Euclidean geometry and use them in proofs
		<b>6</b>	Comments geometric concepts with a deductive point of view
		<b>7</b>	Formulates sufficient and complete definitions for the concepts of triangle, rectangle and polygon and make modulation between these definitions and geometric properties
		<b>8</b>	Realises basic geometric drawings with ruler and compass and make detailed explanations for these drawings
		<b>9</b>	Defines the concepts of the circle and disk, prove theorems about the angle and length.
		<b>10</b>	Formulates properties of objects in space, areas and volumes of solids
<b>21</b>	Course Content:		
		<b>Course Content:</b>	

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 parallel 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			
14			
22	Textbooks, References and/or Other Materials:		
23	Assesment		
TERM LEARNING ACTIVITIES		NUMBER	WEIGHT
Midterm Exam		1	40.00
Quiz		0	0.00
Home work-project		0	0.00
Final Exam		1	60.00
Total		2	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	
<b>24</b>	<b>ECTS / WORK LOAD TABLE</b>

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	14	4.00	56.00
Homeworks	4	12.00	48.00
Projects	2	17.00	34.00
Field Studies	0	0.00	0.00
Midterm exams	1	25.00	25.00
Others	0	0.00	0.00
Final Exams	1	35.00	35.00
Total Work Load			240.00
Total work load/ 30 hr			8.00
ECTS Credit of the Course			4.00

<b>25</b>	<b>CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS</b>															
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	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	PQ11	PQ12	PQ13	PQ14	PQ15	PQ16
ÖK1	4	0	3	0	5	1	2	0	0	0	0	0	0	0	0	0
ÖK2	3	0	3	0	5	0	4	0	0	0	0	0	0	0	0	0
ÖK3	3	0	2	0	5	0	5	0	0	0	0	0	0	0	0	0
ÖK4	3	0	2	0	1	0	2	1	0	0	0	0	0	0	0	0
ÖK5	3	0	2	0	5	0	5	0	0	0	0	0	0	0	0	0
ÖK6	3	0	3	0	5	0	5	0	0	0	0	0	0	0	0	0
ÖK7	3	0	3	0	5	0	5	0	0	0	0	0	0	0	0	0
ÖK8	3	0	4	0	4	0	4	0	0	3	0	0	0	0	0	0
ÖK9	3	0	2	0	5	0	5	0	0	0	0	0	0	0	0	0
ÖK10	2	0	1	0	4	0	4	2	0	0	0	0	0	0	0	0

**LO: Learning Objectives PQ: Program Qualifications**

<b>Contribution Level:</b>	<b>1 very low</b>	<b>2 low</b>	<b>3 Medium</b>	<b>4 High</b>	<b>5 Very High</b>
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