

GENERAL MATHEMATICS AND TEACHING I

1	Course Title:	GENERAL MATHEMATICS AND TEACHING I	
2	Course Code:	MAT5119	
3	Type of Course:	Optional	
4	Level of Course:	Second Cycle	
5	Year of Study:	1	
6	Semester:	1	
7	ECTS Credits Allocated:	3.00	
8	Theoretical (hour/week):	2.00	
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:	Dr. Öğr. Üyesi BAHTİYAR BAYRAKTAR	
15	Course Lecturers:		
16	Contact information of the Course Coordinator:	E-mail: bbayraktar@uludag.edu.tr, İş Tel: +90(224) 294 22 98. Adres: UÜ, Eğitim Fakültesi, İlköğretim Bölümü, Matematik Eğitimi Anabilim Dalı, 16059 Görükle / BURSA	
17	Website:		
18	Objective of the Course:	The purpose of the course is to comprehend the importance of mathematics and the basic notions of the mathematical concepts, plus to gain practice skills in this specialty.	
19	Contribution of the Course to Professional Development:		
20	Learning Outcomes:		
		1	Concepts and properties of proposition can be defined. The principle of induction and the concepts of range and absolute value are learnt.
		2	Set concept is known and operations related with it can be done. Systems of numbers and their properties are learnt. The base arithmetic is known.
		3	Relation concept and its properties are known. Equivalence and ordered relation can be described.
		4	The definition of the concept of function, its types and features are known.
		5	The concept of limit and its characteristics are known.
		6	Limit calculations can be done.
		7	The concept of continuity and its features are known.
		8	The concept of continuity and types of discontinuity are known.
		9	The concept of derivative can be defined.
		10	The rules of derivation are known.
21	Course Content:		
		Course Content:	

Week	Theoretical	Practice		
1	Propositional logic. General concepts and processes. Main characteristics of the operations. Proving methods. Exercises.			
2	The concept of sets. Operations related with sets. Exercises..			
3	System of numbers. Definitions. The base of arithmetic. Exponential, root and logarithmic numbers. Exercises.			
4	Absolute value. Complex numbers. Exercises. Polar notation of complex numbers. Equations of nth roots. Exercises.			
5	Relation: Ordered pairs, cartesian product, the definition of correlation, properties of relation, inverse relation. Equivalence Relation and Order Relation.			
6	Definition of function, function types, inverse function, composite functions. Some special functions (linear, quadratic functions)			
7	Some special functions (absolute value, notation, the exact value, polynomial, rational, closed, partial, parametric).			
8	Trigonometric functions, inverse-trigonometric functions and their graphs.			
9	Exponential functions, logarithmic functions. Practice related with Functions. Exercises.			
10	The concept of limit. A variable approaches the			
Activites		Number	Duration (hour)	Total Work Load (hour)
Theoretical	continuity, features of continuous functions, discontinuity types. Exercises	14	4.00	56.00
Practicals/Labs		0	0.00	0.00
Self study	interpretation of the derivative. Derivation	14	5.00	70.00
Homeworks		0	0.00	0.00
13 Projects	Derivation rules, derivative of inverse and compound functions. High-ordered	0	0.00	0.00
Field Studies		0	0.00	0.00
14 Midterm exams	Derivative of the parametric and closed functions. Exercises	1	8.00	8.00
Others		0	0.00	0.00
22 Final Exams	Textbooks, References and/or Other Materials:	1	16.00	16.00
Total Work Load				150.00
Total work load/ 30 hr		2		5.00
ECTS Credit of the Course				3.00
		Volume 1,2 , 4th Edition, 1985.		
23	Assesment			
TERM LEARNING ACTIVITIES		NUMBE R	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																
24	ECTS / WORK LOAD TABLE															
25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS															
	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	PQ11	PQ12	PQ13	PQ14	PQ15	PQ16
LO: Learning Objectives PQ: Program Qualifications																
Contribution Level:	1 very low			2 low			3 Medium			4 High			5 Very High			