

Course Description					
Name	Code	Semester	T+A Hour	Credit	ECTS
MATHEMATICS for SOCIAL SCIENCES	INT1212715	Spring Semester	3+0	3	4
<b>Prerequisites Courses</b>					
<b>Recommended Elective Courses</b>					
<b>Language of Instruction</b>	English				
<b>Course Level</b>	First Cycle (Bachelor's Degree)				
<b>Course Type</b>	Required				
<b>Course Coordinator</b>	Assoc.Prof. Defne YABAŞ				
<b>Name of Lecturer(s)</b>	Assoc.Prof. Defne YABAŞ				
<b>Assistant(s)</b>					
<b>Aim</b>	Students are aimed to have the necessary qualifications and background to be able to solve the mathematical problems encountered in real life situations.				
<b>Course Content</b>	This course contains; Introduction of the course Number sets and introduction to numbers ,Characteristics of number sets Operations with numbers ,Introduction to exponent numbers, properties of exponent numbersOperations with exponents,Introduction to radical numbers Characteristics of radical numbers Operations with radical numbers ,Operations with exponents and radical numbers Introduction to algebraic expressions ,Operations with algebraic expressions Common multiplier and factorization ,Fractions Operations with fractions (simplification, rationalization of the denominator)Review ,Fractions Operations with fractions (simplification, rationalization of the denominator),Equations First-order linear equations ,Quadratic equations Inequalities Absolute value ,Inequality with absolute value and equations Functions and Graphs,Functions and Graphs ,Introduction to Probability ,Introduction to Probability .				
<b>Course Learning Outcomes</b>			<b>Teaching Methods</b>	<b>Assessment Methods</b>	
1. Operate on numbers algebraically			12, 14, 16, 9	A, G	
2. Express the problems related with the fields of study using equations and inequalities.			12, 14, 16, 9	A, G	
3.1 Illustrate equations and inequalities.			12, 14, 16, 9	A	
3.2 Explain the logic of equation and inequality.			12, 14, 16, 9	A	
3.3 Explain roots of equations.			12, 14, 16, 9	A	
3.4 Find roots of equations			12, 14, 16, 9	A	
3.5 Explain the solution interval of inequality			12, 14, 16, 9	A	
3.6 Find the solution interval of inequality			12, 14, 16, 9	A	
4. Analyse functions.			12, 14, 16, 9	A, G	
4.1 Recall different kinds of functions.			12, 14, 16, 9	A	
4.2 Find value of function at a point			12, 14, 16, 9	A	
4.3 Sketch the functions.			12, 14, 16, 9	A	
4.4 Find value of function at a point by using graph of the function			12, 14, 16, 9	A	
4.5 Use the natural logarithm function to solve equations.			12, 14, 16, 9	A	
4.6 Demonstrate the operations of translation and reflection on any function.			12, 14, 16, 9	A	
5. Describe the phenomena related with the fields of study using systems of equations.			12, 14, 16, 9	A	
5.1 Explain systems of equations.			12, 14, 16, 9	A	
5.2 Solve systems of linear equations.			12, 14, 16, 9	A	
<b>Teaching Methods</b>	12: Problem Solving Method, 14: Self Study Method, 16: Question - Answer Technique, 9: Lecture Method				
<b>Assessment Methods</b>	A: Traditional Written Exam, G: Quiz				
<b>Lecture Schedule</b>					
<b>Sequence</b>	<b>Topics</b>	<b>Preliminary Preparation</b>			
1	Introduction of the course Number sets and introduction to numbers				
2	Characteristics of number sets Operations with numbers				
3	Introduction to exponent numbers, properties of exponent numbersOperations with exponents				
4	Introduction to radical numbers Characteristics of radical numbers Operations with radical numbers				
5	Operations with exponents and radical numbers Introduction to algebraic expressions				
6	Operations with algebraic expressions Common multiplier and factorization				
7	Fractions Operations with fractions (simplification, rationalization of the denominator)Review				
8	Fractions Operations with fractions (simplification, rationalization of the denominator)				
9	Equations First-order linear equations				
10	Quadratic equations Inequalities Absolute value				
11	Inequality with absolute value and equations Functions and Graphs				
12	Functions and Graphs				
13	Introduction to Probability				
14	Introduction to Probability				
<b>Evaluation Methods</b>		<b>Weight(%)</b>			
Midterm Exam		40			
General Exam		60			

**Resources**

Lecture NotesE. Haussler, R. S. Paul , R. J. Wood; Introductory Mathematical Analysis for Business, Economics and the Life and Social Sciences  
Ian Jacques ; Mathematics for Economics and Business  
Bülent Kobu ; İşletme Matematiği  
Alpha, Chiang, Matematiksel İktisadın Temel Yöntemleri.