

<b>Department</b> Department of Mathematics			<b>Academic Year</b> 2022-2023	<b>Date</b> 01/12/2022	
<b>Course Unit Code</b> MATH2116	<b>Course Unit Title</b> Trigonometry and Curve Sketching		<b>Semester/Year</b> Spring / 2	<b>Number of ECTS Credits</b> 4	
<b>Language of Instruction</b>	Turkish				
<b>Type of Course Unit</b>	Elective				
<b>Prerequisites and co-requisites</b>	-				
<b>Address of course</b>	-				
<b>Local Credit</b>	<b>Theoretical</b>	<b>Practical</b>	<b>Laboratory</b>	<b>Presentation</b>	<b>Project</b>
2	2	0	-	-	-
<b>Name of Lecturers</b>	Professor Yavuz ALTIN				
<b>Assistants</b>	-				

<b>Course content</b>	Angle measurement units, trigonometric values of a narrow angle in the perpendicular triangle, Unit circle and winding function, Trigonometric functions, Trigonometric identities, Finding other ratios when given one of the trigonometric ratios, Addition and Substraction formulas and half angle identities, Transformation formulas and inverse transformation formulas, Sine-Cosine and tangent theorems, area of a triangle, Trigonometric equations, Finding the period, Logarithmic function, Exponential function, Curve sketching, horizontal asimptot, vertical asimptot, skewed asimptot, Sketching curves on Cartesian coordinates, Graphics of trigonometric functions, Polar coordinates, Sketching curves on polar coordinates
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Weekly Detailed Course Contents	
Week	Topic
1	Angle measurement units, trigonometric values of a narrow angle in the perpendicular triangle
2	Unit circle and winding function
3	Trigonometric functions, trigonometric identities
4	Finding other ratios when given one of the trigonometric ratios
5	Addition and substraction formulas and half angle identities
6	Transformation formulas and inverse transformation formulas
7	Sine-Cosine and tangent theorems, area of a triangle
8	Trigonometric equations
9	General application
10	Finding the period, inverse trigonometric functions, logarithmic function, exponential function
11	Curve sketching, horizontal asimptot, vertical asimptot, skewed asimptot
12	Sketching curves on cartesian coordinates, graphics of trigonometric functions
13	Polar coordinates, sketching curves on polar coordinates
14	A brief evaluation of the course content and topics

<b>Course Resources</b>	1. Trigonometri, Apotemi Yayınları, Fatih İhtiyaroğlu, Barış Şahbaz. 2. Analiz I, Mustafa Balcı, Balcı Yayınları
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Assessment Methods and Criteria	In-Term studies	Quantity	Percentage (%)
	Mid-Term Exams	1	40
	Quizzes	-	-
	Assignments	-	-
	Projects	-	-
	Term assignment	-	-
	Laboratory	-	-
	Other	-	-

	<b>Final exam</b>	1	60
<b>On Assessment Methods and Criteria</b>	A grade of success; is determined by using the relative evaluation system or the discretion of the instructor. In order to be able to evaluate the courses in which the relative evaluation system and the teaching staff member's discretion are applied, the final exam score of the student must be at least YSAS. Students who fall below this score are considered to fail directly. For the courses that can not be evaluated with the relative evaluation system, the distribution of the final grade of the final grade and the letter grades which are the equivalents of the success grades are determined by the consent of the instructor who gives the lesson using the table prepared by the Senate with 100 points. A student who has received a grade AA, BA, BB, CB or CC grade is deemed to have completed that course. A student who has received one of the grade DC or DD grades is deemed to have fulfilled that course condition. In order for a student who takes DD and DC letters to be counted as successful, the GNO must be at least 2.00. A student who receives a graded FF grade is considered to have failed that course.		

<b>Percentage of Course Category (%)</b>	<b>Mathematics and Basic Sciences</b>	100
	<b>Computer Sciences</b>	0
	<b>Programming Design</b>	0
	<b>Social sciences</b>	0

<b>Course Outcome</b>	<ol style="list-style-type: none"> <li>To create necessary information infrastructure related to trigonometry and curve sketching lesson</li> <li>To acquire the technical knowledge which is related to the course of Trigonometry and Curve Sketching and which can produce the most appropriate solution for the problems requiring solving</li> </ol>
<b>Aims of the course</b>	To convey basic information about trigonometry and curve sketching to students and to support theoretical data through application
<b>The way of processing course</b>	Face to face

<b>Relation of the course with program outcomes</b>				
Learning outcomes		1	2	3
<b>1</b>	To have advanced theoretical and applied knowledge in a way to prioritize the scientific approach supported by textbooks containing up-to-date information in the field, application tools and other resources			
<b>2</b>	Adapting and transferring the knowledge gained in the field to secondary education		X	
<b>3</b>	Ability to independently carry out an advanced study in the field			
<b>4</b>	Be aware of the necessity of lifelong learning and continuously improve their professional knowledge and skills.			
<b>5</b>	Using a foreign language at least at the European Language Portfolio B1 General Level, following the information in the field and being able to communicate with colleagues			
<b>6</b>	To be able to use information and communication technologies together with computer software at minimum advanced level of European computer license required by the field.			
<b>7</b>	Have the ability to make oral and written presentation in native language			
<b>8</b>	Having the ability to understand spoken English and use English at reading level			
<b>9</b>	To have the ability to assimilate mathematical concepts and understand the relationships between them, to recognize different aspects of the same concepts and relationships			
<b>10</b>	To have the ability to define and formulate the relationships between items in non-mathematical disciplines in the language of mathematics.			X
<b>11</b>	To have the ability to use mathematical knowledge in different problems			X
<b>12</b>	Having the ability to develop computer programs using mathematical knowledge			
<b>Contribution of the course: 1:No 2:Partially 3:Completely</b>				

**Preparer:** Associated Professor Emrah YILMAZ  
**Preparation date:** 01/12/2022