

Department Department of Mathematics			Academic Year 2022-2023	Date 01/12/2022	
Course Unit Code MATH1104	Course Unit Title Calculus II		Semester/Year Spring / 1	Number of ECTS Credits 7	
Language of Instruction	Turkish				
Type of Course Unit	Compulsory				
Prerequisites and co-requisites	-				
Address of course	-				
Local Credit	Theoretical	Practical	Laboratory	Presentation	Project
5	4	2	-	-	-
Name of Lecturers	Professor Hıfı ALTINOK				
Assistants	-				

Course content	Indefinite integrals, methods of integration, definite (Riemann) integral, applications of definite integral (limits, area, volumes, the area of a surface of revolution, account of length of a curve), series and tests of convergence
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Weekly Detailed Course Contents	
Week	Topic
1	Indefinite integrals and main integration formulas
2	Methods of integration (change of variables method)
3	Methods of integration (integration by parts method, reduction formulas)
4	Methods of integration (methods of partial fraction decomposition, integrals of rational and irrational functions)
5	Methods of integration (trigonometric integrals and changing trigonometric variables)
6	Definite integral, integral of step functions
7	Riemann Integral, Solutions of questions
8	General application
9	Applications of definite integral (calculation of limits, account of area)
10	Applications of definite integral (calculation of area and volumes)
11	Applications of definite integral (calculation of the surface area, length of a curve)
12	Series (series with positive terms, any-termed, alternating)
13	Tests of convergence for series and related problems
14	A brief evaluation of the course content and topics

Course Resources	1. Mathematical Analysis I (Mustafa Balcı) 2. Calculus I (Ahmet Dernek) 3. Solving Mathematical Analysis I (Mustafa Balcı)
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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	-	-
	Final exam	1	60
On Assessment Methods and	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		

Criteria	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.
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Percentage of Course Category (%)	Mathematics and Basic Sciences	100
	Computer Sciences	0
	Programming Design	0
	Social sciences	0

Course Outcome	Students have basic information about indefinite and definite integral, series and support these concepts with applications.
Aims of the course	1. To create the necessary infrastructure of the students in regard to the Calculus lesson. 2. Acquiring the technical knowledge that will be able to produce the most suitable solution to the students in problems that are related to analysis lesson and require solution.
The way of processing course	Face to face

Relation of the course with program outcomes				
Learning outcomes		1	2	3
1	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			
2	Adapting and transferring the knowledge gained in the field to secondary education		X	
3	Ability to independently carry out an advanced study in the field			
4	Be aware of the necessity of lifelong learning and continuously improve their professional knowledge and skills.			
5	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			
6	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.			
7	Have the ability to make oral and written presentation in native language			
8	Having the ability to understand spoken English and use English at reading level			
9	To have the ability to assimilate mathematical concepts and understand the relationships between them, to recognize different aspects of the same concepts and relationships			X
10	To have the ability to define and formulate the relationships between items in non-mathematical disciplines in the language of mathematics.			X
11	To have the ability to use mathematical knowledge in different problems			
12	Having the ability to develop computer programs using mathematical knowledge			
Contribution of the course: 1:No 2:Partially 3:Completely				

Preparer: Professor Hıfı ALTINOK

Preparation date: 01/12/2022