Fizik Bölümü / PHYSICS /

Course Code	Course Name	Teorical	Practice	Laboratory	Credits	ECTS
FZK-1012	General Mathematics II	4.00	2.00	0.00	5.00	7.00

Course Detail

Course Language	:	Turkish
Qualification Degree	:	Bachelor
Course Type	:	Compulsory
Preconditions	:	Not
Objectives of the Course	:	This course aims to describe, apply, and discuss integrals and series.
Course Contents	:	Primitive of a Function and Indefinite Integral (Anti-Derivative), Indefinite Integration Rules, Indefinite Integral Types, Definite Integral (Riemann's Integral), Fundamental Theorem of Analysis and Properties of Definite Integral, Applications of Definite Integral (Areas, Volumes, Arc Length, Areas of Surfaces of Revolution), Improper Integrals, Applications of Definite Integral to Physics
Recommended or Required Reading	:	Genel Matematik ve Finans Uygulamaları, Editör Dr. Öğr. Üyesi Barış ALBAYRAK, 2018, Dora Yayınları CALCULUS: A Complete Course/ Robert A. Adams, Christopher Essex; Pearson, 2010 THOMAS' CALCULUS / Ross L. Finney, Maurice D. Weir, Frank R. Giordano; Boston: Addison-Wesley, 2000
Planned Learning Activities and Teaching Methods	:	Verbal Lecture, Written Exam
Recommended Optional Programme Components	:	-
Instructors	:	Assoc. Prof. Dr. Serdar Enginoğlu
Instructor's Assistants	:	-
Presentation Of Course	:	Face to Face

Course Outcomes

Upon the completion of this course a student :

1 Calculate Anti-Derivatives (Indefinite Integrals)

2 Calculate the Riemann Integrals (Definite Integral)

3 Apply Definite Integrals.

4 Calculate Improper Integral

5 Apply Definite Integrals to Physics

Preconditions

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Weekly Contents

	Teorical	Practice	Laboratory	Preparation Info	Teaching Methods
1.Week	*The Primitive of a Function and Indefinite Integral (Anti-derivative)				
2.Week	*Indefinite Integration Rules				
3.Week	*Types of Indefinite Integrals				
4.Week	*Types of Indefinite Integrals				
5.Week	*Types of Indefinite Integrals				
6.Week	*Definite Integral (Riemann's Integral)				
7.Week	*The Fundamental Theorem of Analysis and Properties of Definite Integral				
8.Week	*Applications of Definite Integral: Areas				
9.Week	*Midterm Exam				
10.Week	*Applications of Definite Integral:Volumes				
11.Week	*Applications of Definite Integral: Arc Lengths				
12.Week	*Applications of Definite Integral: Areas of Surfaces of Revolution				
13.Week	*Improper Integrals				
14.Week	*Applications of Definite Integrals to Physics				

Assesment Methods %

2 Final : 60.000

3 Vize : 40.000

ECTS Workload

Activities	Count	Time(Hour)	Sum of Workload
Vize	1	2.00	2.00
Final	1	2.00	2.00
Preparation for midterm	1	12.00	12.00
Preparation for final	1	12.00	12.00
Class Hours (14 weeks)	14	6.00	84.00
Further Study	14	4.00	56.00
Preliminary Study	14	2.00	28.00
		Total :	196.00
		Sum of Workload / 30 (Hour) :	7
		ECTS :	7.00

Program And OutcomeRelation

	P.O. 1	P.O. 2	P.O. 3	P.O. 4	P.O. 5	P.O. 6	P.O. 7	P.O. 8	P.O. 9	P.O. 10	P.O. 11	P.O. 12	P.O. 13	P.O. 14	P.O. 15	P.O. 16	P.O. 17	P.O. 18	P.O. 19	P.O. 20	P.O. 21	P.O. 22	P.O. 23	P.O. 24
L.O. 1	4	5	3	4	4	3	5	4	3	5	4	3	5	4	3	0	0	0	0	0	0	0	0	0
L.O. 2	3	4	5	4	5	4	3	5	4	3	5	3	4	5	3	0	0	0	0	0	0	0	0	0
L.O. 3	4	3	5	4	3	5	4	3	5	4	3	5	4	3	5	0	0	0	0	0	0	0	0	0
L.O. 4	5	4	3	5	3	4	5	4	3	5	4	3	5	4	4	0	0	0	0	0	0	0	0	0
L.O. 5	4	5	4	4	4	5	4	3	4	4	5	3	4	5	4	0	0	0	0	0	0	0	0	0

Ders/Program Çıktıları İlişkisi

P.O. 1	P.O. 2	P.O. 3	P.O. 4	P.O. 5	P.O. 6	P.O. 7	P.O. 8	P.O. 9	P.O. 10	P.O. 11	P.O. 12	P.O. 13	P.O. 14	P.O. 15	P.O. 16	P.O. 17	P.O. 18	P.O. 19	P.O. 20	P.O. 21	P.O. 22	P.O. 23	P.O. 24	P.O. 2
5	4	3	4	5	4	4	3	4	5	5	4	4	5	3	0	0	0	0	0	0	0	0	0	0