CALCULUS II (INTEGRAL CALCULATIONS)

1	Course Title:	CALCULUS II (INTEGRAL CALCULATIONS)
2	Course Code:	MAT1072
3	Type of Course:	Compulsory
4	Level of Course:	First Cycle
5	Year of Study:	1
6	Semester:	2
7	ECTS Credits Allocated:	6.00
8	Theoretical (hour/week):	3.00
9	Practice (hour/week):	2.00
10	Laboratory (hour/week):	0
11	Prerequisites:	There are no prerequisites.
12	Language:	Turkish
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Prof. Dr. ESEN İYİGÜN
15	Course Lecturers:	Doç. Dr. Sibel KOPARAL
16	Contact information of the Course Coordinator:	Prof.Dr.Esen İYİGÜN e-mail: esen@uludag.edu.tr phone: 0.224.2941766 address: Bursa Uludağ University, Art and Science Faculty, Department of Mathematics,16059, Bursa.
17	Website:	
18	Objective of the Course:	The aim of the course is to make the students gain the basic subjects of mathematics, to teach the notions of integrals, techniques of integration, applications of integration, further applications of integration, sequences, series and the related notions.
19	Contribution of the Course to Professional Development:	Mathematics II course contributes to students in the field of recognizing problems, deciding on the solution method and gaining the ability to solve.
20	Learning Outcomes:	
	1	Data detection, evaluation and use the data on suitable places for problems
	2	The students learn what does integral mean, how to calculate an integral and applications of integration.
	3	The students know how to solve a problem.
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21	Course Content:	

Course Content:

Week	Theoretical	Practice

1	The indefinite integral and continuous functions.	Problems solving.
2	Upper and lower sums and the fundamental theorems.	Problems solving.
3	Definite integral and Riemann sums.	Problems solving.
4	Inequalities and improper integrals.	Problems solving.
5	Substitution, integration by parts and partial fractions.	Problems solving.
6	Trigonometric integrals, binomial integrals, exponential substitutions.	Problems solving.
7	Account the length of the curve and volume calculation.	Problems solving.
8	Repeating courses	Problems solving.
9	Area and volume calculation of surfaces of revolution	Problems solving.
10	Account area and arc length in polar coordinates	Problems solving.
11	Sequences ve convergence of sequences.	Problems solving.
12	Series, series with positive terms, the ratio test, alterne series,power series, the integral test and taylor series.	Problems solving.
13	Multiple integrals.	Problems solving.
14	Applications of multiple integrals.	Problems solving.

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	3.00	42.00
Practicals/Labs	14	2.00	28.00
Self study and preperation	14	2.00	28.00
Homeworks	0	0.00	0.00
Projects	14	1.00	14.00
Field Studies	0	0.00	0.00
Midterm exams	1	10.00	10.00
Others	14	3.00	42.00
Final Exams	1	16.00	16.00
Total Work Load			190.00
Total work load/ 30 hr			6.00
ECTS Credit of the Course			6.00

Contribution of Final Exam to Success Grade	60.00
Total	100.00
Measurement and Evaluation Techniques Used in the Course	The system of relative evaluation is applied.

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
ÖK1	5	5	4	0	4	0	0	3	0	0	0	0	0	0	0	0

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3. H.Hilmi Hacısalihoğlu, Mustafa Balcı, Fikri Gökdal,
678 s.

TERM LEARNING ACTIVITIES | **NUMBE** | **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

ÖK2	5	4	3	0	4	0	0	0	0	0	0	0	0	0	0	0
ÖK3	5	5	5	4	5	0	0	4	0	0	0	0	0	0	0	0

LO: Learning Objectives PQ: Program Qualifications

Contribution Level:	**1 very low**	**2 low**	**3 Medium**	**4 High**	**5 Very High**