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:	Doç.Dr. ESEN İYİGÜN
15	Course Lecturers:	Prof.Dr.Kadri Arslan Yrd.Doç.Dr.Sezayi Hızlıyel
16	Contact information of the Course Coordinator:	e-mail: esen@uludag.edu.tr phone: 0.224.2941766 address: 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:	
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	Midterm Exam+Repeating courses	
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.

22	Textbooks, References and/or Other Materials:	1. Prof. Dr.Mustafa Balcı, 2003, Genel Matematik I, Balcı Yayınları,Cilt I, 2.Baskı, ISBN-975-6683-00-7,Ankara,418 s. 1988, Temel ve Genel Matematik, Cilt I, 3. Baskı, Ankara, 678 s.

23	Assesment		
TERM LEARNING ACTIVITIES	**NUMBER**	**WEIGHT**	
Midterm Exam	1	40.00	
Home work project	0	0.00	
Final Exams	2	100.00	
Total		100.00	
Success Grade			

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	1	16.00	16.00
Total Work Load			180.00
Total work load/ 30 hr			6.00
ECTS Credit of the Course			6.00

Total	100.00
Measurement and Evaluation Techniques Used in the Course	

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

ÖK3	4	4	4	0	5	0	0	0	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**