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:	None
12	Language:	Turkish
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Doç. Dr. BETÜL BULCA
15	Course Lecturers:	Matematik bölümünün tüm öğretim üyesi ve öğretim görevlileri
16	Contact information of the Course Coordinator:	ometin@uludag.edu.tr, 0 (224) 2941760 U.Ü. Fen-Ed. Fak. Matematik Bölümü, Görükle/BURSA
17	Website:	
18	Objective of the Course:	is to give sufficient mathematics knowledge to solve engineering problems to students and also to improve the ability of finding solution to problems and analytical thinking.
19	Contribution of the Course to Professional Development:	
20	Learning Outcomes:	
	1	Knows the concept of integral
	2	Learns the rules of calculating integral
	3	Calculates integral of functions
	4	Learns the applications of integral
	5	Knows the concept of serie
	6	Determines whether a serie is convergent or not
	7	Knows power series.
	8	Knows some basic definitons and theorems of mathematics
	9	
	10	
21	Course Content:	

	Course Content:	
Week	Theoretical	Practice
1	The indefinite integral,area.	Solving problem
2	Upper and lower sums	Solving problem
3	The fundamental theorem of integration	Solving problem
4	Inequalities and improper integrals	Solving problem
5	Techniques of integration	Solving problem

6	Techniques of integration	Solving problem	
7	Applications of integratin(length of curves,surface of revolution)	Solving problem	
8	Midterm exam and evaluation of midterm exam, repeat of previous subjects	Solving problem	
9	Applications of integratin(volumes of revolution,work and center of gravity).	Solving problem	
10	Taylor's formula and estimate for the remainder	Solving problem	
11	Convergent series,series with positive terms.	Solving problem	
12	Convergence Tests	Solving problem	
13	Power series	Solving problem	
14	Differentiation and integration of power series and their some applications	Solving problem	

22	Textbooks, References and/or Other Materials:	1-A First Course in Calculus, Serge Lang, World Student Series Third Edition, Addison-Wesley Publishing Company, ISBN:0-201-04148-0 2-Thomas Calculus, 11.Edition,Pearson Addison-Wesley Publishing Company -2005 3) Temel Matematik, Basri Çelik, İsmail Naci Cangül, Nisa Çelik, Osman Bizim, Metin Öztürk; Dora Yayınları, 2010 4) Genel Matematik, Mustafa Balcı, Balcı yayınları, 2003. 5) Genel Matematik (Diferensiyel ve İntegral Hesap), Ahmet Tekcan, Betül Gezer, Osman Bizim; Dora Yayınları, 2011

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	3.00	42.00
Midterm Exam	1	40.00	
Practicals/Labs	14	2.00	28.00
Self study and preperation	14	2.00	28.00
Home work-project	0	0.00	
Homeworks	0	0.00	0.00
Projects	0	0.00	0.00
Total	2	100.00	
Field Studies	0	0.00	0.00
Midterms Grade / Midterm exams	1	13.00	13.00
Others	14	4.00	56.00
Final Exams	1	13.00	13.00
Total		100.00	
Total Work Load			180.00
Course Total work load/ 30 hr			6.00
ECTS Credit of the Course			6.00

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	2	3	3	2	2	3	1	3	2	2	1	1	0	0	0	0
ÖK2	3	3	2	3	3	3	1	3	2	3	1	1	0	0	0	0
ÖK3	3	3	2	2	3	2	1	3	2	2	2	2	0	0	0	0
ÖK4	4	4	3	3	3	3	3	4	3	3	3	2	0	0	0	0

ÖK5	2	2	1	2	2	3	3	2	2	3	2	1	0	0	0	0
ÖK6	2	2	2	1	3	2	2	3	2	2	3	2	0	0	0	0
ÖK7	3	2	2	2	2	3	2	2	3	2	2	2	0	0	0	0
ÖK8	3	3	3	3	4	3	3	2	3	3	3	3	0	0	0	0

LO: Learning Objectives   PQ: Program Qualifications

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