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:	-
12	Language:	Turkish
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Prof. Dr. SÜLEYMAN ÇİFTÇİ
15	Course Lecturers:	Matematik bölümünün tüm öğretim üyesi ve öğretim görevlileri
16	Contact information of the Course Coordinator:	E-posta: sciftci@uludag.edu.tr Telefon: +90 224 2941754 Adres: Uludağ Üniversitesi Fen-Edebiyat Fakültesi Matematik Bölümü 16059 Görükle-Bursa-TÜRKİYE
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

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	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	13.00	13.00
Others	14	4.00	56.00
Final Exams	1	13.00	13.00
Total Work Load			180.00
Total work load/ 30 hr			6.00
ECTS Credit of the Course			6.00

22	Textbooks, References and/or Other Materials:	1-A First Course in Calculus, Serge Lang, World Student Series Third Edition, Addison Wesley Publishing 2-Thomas Calculus, 11. Edition,Pearson Addison Wesley Publishing Company, 2005 3) Çalık, Osman Bizim, Metin Öztürk; Dora Yayınları, 2010 4) Genel Matematik, Mustafa Balcı, Balcı yayınları, 2003 Ahmet Tekcan, Betül Gezer, Osman Bizim; Dora Yayınları, 2011
23	Assessment	

TERM LEARNING ACTIVITIES	NUMBE	WEIGHT
Midterm Exam	1	40.00
Home work-project	0	0.00
Final Exam	1	60.00
Total	2	100.00
Contribution of Term (Year) Learning Activities to Success Grade		40.00
Contribution of Final Exam to Success Grade		60.00
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	4	3	3	1	3	1	1	1	1	1	1	1	1	1	0	0
ÖK2	4	3	2	1	3	2	1	2	1	1	1	1	1	1	0	0
ÖK3	5	4	4	2	4	2	1	2	1	1	1	1	1	1	0	0
ÖK4	5	4	3	2	3	2	1	1	1	1	1	1	1	1	0	0
ÖK5	5	3	4	2	3	2	1	1	1	1	1	1	1	1	0	0
ÖK6	5	3	3	2	3	2	1	1	1	1	1	1	1	1	0	0
ÖK7	4	2	2	1	2	2	1	1	1	1	1	1	1	1	0	0
ÖK8	5	3	4	2	3	2	1	1	1	1	1	1	1	1	0	0
LO: Learning Objectives PQ: Program Qualifications																
Contribution Level:	**1 very low**		**2 low**			**3 Medium**			**4 High**			**5 Very High**				