CALCULUS I(DIFFERENTIAL CALCULATIONS)

1	Course Title:	CALCULUS I(DIFFERENTIAL CALCULATIONS)	
2	Course Code:	MAT1071	
3	Type of Course:	Compulsory	
4	Level of Course:	First Cycle	
5	Year of Study:	1	
6	Semester:	1	
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:	Prof.Dr.Kadri Arslan Yrd.Doç.Dr.Sezayi Hızlıyel	
16	Contact information of the Course Coordinator:	e-posta: esen@uludag.edu.tr telefon: 0.224.2941766 adres: Uludağ Üniversitesi, Fen-Edebiyat Fakültesi, Matematik Bölümü, 16059, Görükle Kampüsü, Bursa	
17	Website:		
18	Objective of the Course:	To train students in understanding of numbers, inequalities, functions and powers. To provide experience in drawing the graph of a curves. To train students in understanding of derivative and rules of derivative. To give knowledge on compute limit. To train students in establishing mathematical modelling of some problems. To provide experience in some special functions.	
19	Contribution of the Course to Professional Development:		
20	Learning Outcomes:		
		1	Knows the corresponding mathematical models to bring up to date problems.Mathematics is a whole, is not the only solution of the problems you learn to reach different methods of solving the problem.
		2	Recognise numbers, inequalities and functions.
		3	Learns in drawing the graph of a curve.
		4	Learns derivative, limit and continuity.
		5	Learns maximum and minimum problems, increasing and decreasing functions.
		6	Learns indeterminate forms and differential.
		7	Learn how to take the derivative of some special functions.
		8	
		9	
		10	
21	Course Content:		
	Course Content:		

Week	Theoretical	Practice
1	Numbers and Inequalities	Solved number and inequality examples.
2	Functions	Function examples given.
3	Graphs	Graphs were drawn.
4	Curves and equations	Examples of the curve and the equation is solved.
5	Limit and Continuity	Were given examples of limit and continuity.
6	The derivative	Examples of derivatives are solved.
7	Higher derivatives and the chain rule	Examples were given of higher order derivatives and the chain rule.
8	Midterm Exam + Repeating courses	Solving problems.
9	Trigonometric functions, their graphs and properties	Graphs were drawn of them by giving examples of trigonometric functions.
10	The maximum and minimum problems, increasing and decreasing functions, the mean value theorem	Examples were given the maximum and minimum problems, increasing and decreasing function examples were solved and examples related to the mean value theorem.
11	Indeterminate forms, Polar coordinates, Parametric curves	Indeterminate forms, polar coordinates and parametric curves were given examples of.
12	Differential, Curve sketching,	Examples were given of differential and curve sketching.
13	Hyperbolic and Inverse functions and their derivatives.	Examples of derivatives of hyperbolic and inverse functions are solved.
14	Exponents and Logarithm functions and their derivatives.	Exponential and logarithmic functions derivatives examples were given.

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			180.00
Total work load/ 30 hr			6.00
ECTS Credit of the Course			6.00

2. Serge Lang, 1980, A First Course in Calculus, Fourth Edition, ISBN 0-201-04148-0, Yale University, 524 s.
1988, Temel ve Genel Matematik, Cilt I, 3. Baskı, Ankara, 678 s.
Publishing Company 2009.
5. James Stewart TÜBA YAYINLARI Kalkülüs Diferansiyel

TERM LEARNING ACTIVITIES	NUMBER	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
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	0	4	4	0	4	0	0	0	3	0	0	0	0	0	0	0
ÖK2	0	4	4	0	3	0	0	0	0	0	0	0	0	0	0	0
ÖK3	0	0	0	4	0	3	0	0	0	3	0	0	0	0	0	0
ÖK4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK5	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0
ÖK6	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0
ÖK7	0	4	0	0	0	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**							