GENERAL MATHEMATIC I

1	Course Title:	GENERAL MATHEMATIC I	
2	Course Code:	MAT1097	
3	Type of Course:	Compulsory	
4	Level of Course:	First Cycle	
5	Year of Study:	1	
6	Semester:	1	
7	ECTS Credits Allocated:	5.00	
8	Theoretical (hour/week):	4.00	
9	Practice (hour/week):	0.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:	no	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Prof. Dr. İSMAİL NACİ CANGÜL	
15	Course Lecturers:	Matematik bölümünün tüm öğretim üyesi ve öğretim görevlileri	
16	Contact information of the Course Coordinator:	E-posta: cangul@uludag.edu.tr Telefon: +90 224 2941756 Adres: Bursa 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 chemical 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:	It supplies the mathematical knowledge necessary for chemists.	
20	Learning Outcomes:		
		1	Calculates limit of functions
		2	Determines whether a function is continuous or not
		3	Knows the concept of derivative
		4	Learns the rules of calculating derivative
		5	Calculates derivative of functions
		6	Sketches graphs of functions
		7	Learn to problems of maximum-minimum
		8	
		9	
		10	
21	Course Content:		

Course Content:

Week	Theoretical	Practice
1	Numbers.	
2	Cartesian product, relation, types of relations.	
3	Functions, properties of functions, type of functions	
4	The definition of limit and rules of limit, continuity	

5	The definition of derivative and derivation rules, the geometrical application of derivative, implicit derivative.	
6	Derivative of some special functions	
7	Problems of change	
8	Midterm exam and evaluation of midterm exam	
9	Increasing and decreasing functions	
10	Fundamental theorems on derivative: Rolle and Main Value Theorems	
11	Maximum and minimum problems	
12	Critical points, increasing, decreasing, convex, concave	
13	L' Hospital rule on limits by using derivative	
14	Graphs of functions	

22	Textbooks, References and/or Other Materials:	[1] Genel Matematik, Mustafa Balcı, Balcı Yayınları, 2003. [2] Genel Matematik, Diferensiyel ve İntegral Hesap, Osman Bizim, Ahmet Tekcan, Betül Gezer. Dora Yayınları, 2011 [3] A First Course in Calculus, Serge Lang, World Student Series Third Edition, Addison-Wesley Publishing Company. [4] Thomas Calculus, 11. Edition,Pearson Addison-Wesley Publishing Company, 2005

Activites		Number	Duration (hour)	Total Work Load (hour)
Theoretical	R	14	2.00	28.00
Practicals/Labs		14	2.00	28.00
Quiz	0	0.00		
Self study and preperation		8	5.00	40.00
Homeworks		2	7.00	14.00
Final Exam	1	60.00		
Projects		1	10.00	10.00
Field Studies		0	0.00	0.00
Contribution of Term (Year) Learning Activities to Success Grade	40.00			
Midterm exams		1	15.00	15.00
Others		0	0.00	0.00
Contribution of Final Exam to Success Grade	60.00			
Final Exams		1	15.00	15.00
Total Work Load				150.00
Total work load/ 30 hr	Measurement and Evaluation Techniques Used in the Course	written exam		5.00
ECTS Credit of the Course				5.00

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	3	0	0	0	3	4	0	0	4	0	4	0	0	0	0
ÖK2	0	3	0	0	0	3	4	0	0	4	0	4	0	0	0	0
ÖK3	0	3	0	0	0	3	4	0	0	4	0	4	0	0	0	0
ÖK4	0	3	0	0	0	3	4	0	0	4	0	4	0	0	0	0

ÖK5	0	3	0	0	0	3	4	0	0	4	0	4	0	0	0	0
ÖK6	0	3	0	0	0	3	4	0	0	4	0	4	0	0	0	0
ÖK7	0	3	0	0	0	3	4	0	0	4	0	4	0	0	0	0

LO: Learning Objectives PQ: Program Qualifications

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