	CALCULUS III	(DIFF	ERENTIAL EQUATIONS)								
1	Course Title:	CALCU	LUS III (DIFFERENTIAL EQUATIONS)								
2	Course Code:	MAT208	33								
3	Type of Course:	Compul	sory								
4	Level of Course:	First Cy	cle								
5	Year of Study:	2									
6	Semester:	3									
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:	Dr. Ögr.	Üyesi NISA ÇELİK								
15	Course Lecturers:	Prof.Dr.Sezai HIZLIYEL Prof.Dr.Emrullah YAŞAR Doç.Dr. Yaşim SAĞLAM ÖZKAN Doç.Dr. Arzu AKBULUT Dr.Öğr.Üyesi Nisa ÇELİK									
16	Contact information of the Course Coordinator:	nisa@uludag.edu.tr, 0-224-2941764 Uludağ Ünv. Fen Ed. Fakültesi Matematik Bölümü Görükle Yerleşkesi 16059 Nilüfer/Bursa									
17	Website:										
18	Objective of the Course:	To introduce differential equations which are appear in a lot of aplications of engineering and investigate to solutions of this									
19	Contribution of the Course to Professional Development:		Students can set up mathematical models at the beginner level. Solve equations containing derivatives.								
20	Learning Outcomes:										
		1	Understands the importance of differential equations in terms of engineering								
		2	Uses the definitions and methods of solution of differential equations								
		3	Solves the first order differential equations.								
		4	Solves the second and higher order differential equations.								
		5	Solves differential equations with boundary conditions.								
		6	Solves differential equations using Laplace transform								
		7									
		8									
		9									
10											
21	Course Content:	C	ourse Content:								
Week	Theoretical	J.	Practice								
1	General concepts and classification, order equations	First	Problem solving								

2	seperable equations, exact equations	S	Problem solving								
3	integral factor, first order linear equa variable substition (Homogenous equality Bernoulli equations, Ricatti Equations)	uations,	Problem solving								
4	Existence and uniqueness theorems order differential equations with appli		Problem solving								
5	High degree of first-order equations		Problem solving								
6	norder linear differential equations: constant coefficient differential equat (method of undetermined coefficients variable-coefficient differential equati (separation of the operator factorizat method of variation of parameters	tions s), ions	Problem solving								
7	reduction of order		Problem solving								
8	Cauchy Euler Equations		Problem solving								
9	Repeating courses		Problem solving								
10	Laplace transforms		Problem solving								
11	Definitons and theorems		Problem solving								
12	Solution of initial value problem with Laplace Transformation		Problem solving								
13	Power series method, solution aroun ordinary and singular point	nd the	Problem solving								
14	Linear differential equations and syst basic theory and solutions, using the		Problem solving								
Activi	tes		Number	Duration (hour)	Total Work Load (hour)						
Theore	tical		Denkiemiei 14	3.00	42.00						
	TAssesment cals/Labs		14	2.00	28.00						
	udy and preperation	R	14	4.00	56.00						
Homev		+	1	30.00	30.00						
PHIZEC		0	0.00	0.00	0.00						
Field S		1	0	0.00	0.00						
Minale	: Mænams	1	60100								
Others		<u> </u>	0	0.00	0.00						
Eipiatrit	প্রুষ্টাকান্ত of Term (Year) Learning Activiti	es to	40100	12.00	12.00						
Total V	Vork Load				178.00						
Fotal w	oution of Final Exam to Success Grad	е	60.00		5.93						
ECTS	Credit of the Course				6.00						
Measu Course	rement and Evaluation Techniques Use	sed in the	The system of re	elative evaluation is applied	d.						
24	ECTS / WORK LOAD TABLE										
25	CONTRIBUTION	OF LEA	RNING OUTC	OMES TO PROGRAM	 ИМЕ						

25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS															
	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ1 0	PQ11	PQ12	PQ1 3	PQ14	PQ15	PQ16
ÖK1	5	4	0	3	0	0	0	0	0	0	0	0	0	0	0	0
ÖK2	5	4	0	3	0	0	0	0	0	0	0	0	0	0	0	0
ÖK3	5	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0

ÖK4	5	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK5	5	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK6	5	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LO: Learning Objectives PQ: Program Qualifications																
Contrib 1 very low ution Level:		2	2 low		3 Medium			4 High			5 Very High					