LINEAR ALGEBRA AND DIFFERANTIAL EQUATIONS WITH MAPLE										
1	Course Title:	LINEAR MAPLE	ALGEBRA AND DIFFERANTIAL EQUATIONS WITH							
2	Course Code:	BMB304	7							
3	Type of Course:	Optional								
4	Level of Course:	First Cyc	le							
5	Year of Study:	3								
6	Semester:	5								
7	ECTS Credits Allocated:	5.00								
8	Theoretical (hour/week):	3.00								
9	Practice (hour/week):	0.00								
10	Laboratory (hour/week):	0								
11	Prerequisites:	None								
12	Language:	Turkish								
13	Mode of Delivery:	Face to f	ace							
14	Course Coordinator:	Prof. Dr.	BASRİ ÇELİK							
15	Course Lecturers:	Yrd.Doç.	Dr. Nisa ÇELİK							
16	Contact information of the Course Coordinator:	basri@u 0224.294	ludag.edu.tr 41762							
17	Website:									
18	Objective of the Course:	Finds the some ba	e solutions of differential equations and the solutions of sic problems on linear algebra by using the Maple program.							
19	Contribution of the Course to Professional Development:									
20	Learning Outcomes:									
		1	Calculates the vectoral operations and plots the graphics of them.							
		2	Finds the lines and planes equations using vectors with Maple.							
		3	Use the method Gram-Schmidt.							
		4	Creates the orthogonal base using Gram-Schmidt's method for giving any base with Maple.							
		5	Learns to calculating the matrix operations and solving the linear equations system with Maple.							
		6	Finds the type-class of differential equations with Maple.							
		7	Solves differential equations of first order and first degree.							
		8	Solves the differential equations of high-order and constant coefficients using Maple.							
		9								
		10								
21	Course Content:									
		Co	ourse Content:							
Week	Theoretical		Practice							
1	Description of course.									
2	A short information about Maple.	***								
3	Vectoral operations and its graphics Maple.	with								

4	Line Mapl	and le.	plane	equa	tions	using v	ectors	s with												
5	Orthogonal bases using Gram-Schmidt's method with Maple.																			
6	Matrices, matrix operations and inverse matrix with Maple.																			
7	Linea	ar eq	Juatio	ns sys	tem v	vith Ma	ple.													
8	Diffe Type	renti e-clas	al and ss of d	d differ differe	ential	operat quatior	tor in I ns in N	Maple Maple.	-											
9	Midte	erm a	and fe	edba	ck															
10	Differential equations of first order and first degree with Maple.																			
11	Solutions of first ordered differential equations of higher degree with Maple.																			
12	Solutions linear differential equations of higher order with Maple.																			
13	Solutions differential equations of constant coefficient with Maple.																			
14	Som	e ex	ample	es.																
22	Textl Mate	Textbooks, References and/or Other Materials:									1)Maple ve Maple ile Matematik, Basri Çelik, Dora Yayınevi, 2.baskı, 2010, Bursa. 2)Adi Diferensiyel Denklemler, Mehmet Çağlıyan, Nisa Çelik, Setenay Doğan, Dora Yayıncılık, 3.baskı, 2010, Bursa.									
Activites								1	Numb	ber		Dura	ition (	hour)	Total Work Load (hour)					
Theoretical R										4			3.00	3.00 42.00						
Practicals/Labs									(	)			0.00		0.00					
Self study and preperation									14			4.00	4.00							
Homeworks									(	0				0.00						
Projects										)			0.00			0.00				
Field Studies									(	)			0.00	0.00			0.00			
Midtern	Contribution of Term (Year) Learning Activities to									40,00				4.00			4.00			
Others	Others									14					42.00					
Final E	Final Exams									1						6.00				
Total W	Total Work Load															150.00				
Heasurement and Evaluation Techniques Used in the Course								ie						ł	5.00					
ECTS Credit of the Course														4	5.00					
25	25 CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS																			
	F	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ1 0	PQ11	PQ12	PQ1 3	PQ14	PQ15	PQ16			
ÖK1	3	3	5	5	4	5	1	1	3	3	2	0	0	0	0	0	0			
ÖK2	3	3	4	5	2	4	1	2	2	2	1	0	0	0	0	0	0			
ÖK3	1	1	5	4	3	4	1	2	3	1	1	0	0	0	0	0	0			
ÖK4	2	2	4	5	2	4	1	2	2	2	2	0	0	0	0	0	0			

ÖK5	2	5	4	2	5	1	1	2	2	1	0	0	0	0	0	0
ÖK6	1	4	3	3	4	1	2	3	3	1	0	0	0	0	0	0
ÖK7	3	5	4	3	5	1	3	2	2	2	0	0	0	0	0	0
ÖK8	1	3	5	2	4	1	3	3	2	1	0	0	0	0	0	0
LO: Learning Objectives PQ: Program Qualifications																
Contrib 1 very low ution Level:			2 low		3 Medium			4 High			5 Very High					