

MATHEMATICS WITH MATLAB

1	Course Title:	MATHEMATICS WITH MATLAB	
2	Course Code:	MAT4083	
3	Type of Course:	Optional	
4	Level of Course:	First Cycle	
5	Year of Study:	4	
6	Semester:	7	
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 face	
14	Course Coordinator:	Prof. Dr. BASRİ ÇELİK	
15	Course Lecturers:		
16	Contact information of the Course Coordinator:	basri@uludag.edu.tr 0224.2941762	
17	Website:		
18	Objective of the Course:	To find a solutions of some mathematical problems on various subject with using Matlab.	
19	Contribution of the Course to Professional Development:		
20	Learning Outcomes:		
		1	to be able to find a result of the numerical operations.
		2	to be able to calculate operations of vectors and matrices with Matlab.
		3	to be able to use Matlab for array and sequence operations.
		4	to be able to make operations on functions with Matlab.
		5	to be able to make operations with polinoms using Matlab.
		6	to be able to find solutions of equations with Matlab.
		7	to be able to find solutions of linear equations systems with Matlab.
		8	to be able to calculate differential and integral.
		9	to be able to plot for functions.
		10	to be able to make some basic programs with Matlab.
21	Course Content:		
		Course Content:	
Week	Theoretical	Practice	
1	Information about course.		
2	Elementary arithmetic operations, variables and assignments.		
3	Algebraic expressions and polynoms with Matlab.		
4	Basic plotting commands with Matlab.		

5	Plotting in space and plotting space curve.	
6	Solutions of Equations and system of equations.	
7	Solutions of inequality and system of inequality.	
8	Arrays and array operations..	
9	Vectors and vector operations.	
10	Matrices and Matrix operations.	
11	Differential and its applications.	
12	Integral and its applications.	
13	Some programming commans of Matlab.	
14	Introduction to Matlab programming.	

22	Textbooks, References and/or Other Materials:	1)Her Yönü İle Matlab, Yrd. Doç. Dr. Mehmet UZUNOĞLU, Ali KIZIL, Ömer Çağlar ONAR, Türkmen Kitabevi, İstanbul. 2) Matlab İle Mühendislik Sistemlerinin Analizi Ve Çözümü, İbrahim YÜKSEL, Dora Yayınevi, Bursa.
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23	Assesment	
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TERM LEARNING ACTIVITIES	NUMBER	WEIGHT		
Midterm Exam	1	40.00		
Quiz	0	0.00		
Activites		Number	Duration (hour)	Total Work Load (hour)
Theoretical	2	100.00	3.00	42.00
Practicals/Labs		0	0.00	0.00
Self study and preperation		14	4.00	56.00
Homeworks		14	3.00	42.00
Projects		0	0.00	0.00
Field Studies		0	0.00	0.00
Midterm exams		1	5.00	5.00
Others		0	0.00	0.00
Final Exams		1	5.00	5.00
Total Work Load				150.00
Total work load/ 30 hr				5.00
ECTS Credit of the Course				5.00

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	1	1	1	5	1	1	4	1	4	4	0	0	0	0	0	0
ÖK2	1	1	1	5	1	1	4	1	4	4	0	0	0	0	0	0
ÖK3	1	1	1	5	1	1	4	1	4	4	0	0	0	0	0	0
ÖK4	1	1	1	5	1	1	4	1	4	4	0	0	0	0	0	0

ÖK5	1	1	1	5	1	1	4	1	4	4	0	0	0	0	0	0
ÖK6	1	1	1	5	1	1	4	1	4	4	0	0	0	0	0	0
ÖK7	1	1	1	5	1	1	4	1	4	4	0	0	0	0	0	0
ÖK8	1	1	1	5	1	1	4	1	4	4	0	0	0	0	0	0
ÖK9	1	1	1	5	1	1	4	1	4	4	0	0	0	0	0	0
ÖK10	1	1	1	5	1	1	4	1	4	4	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			