ALGORITHM DEVELOPMENT										
1	Course Title:	ALGORI	RITHM DEVELOPMENT							
2	Course Code:	MAT4047								
3	Type of Course:	Optional								
4	Level of Course:	First Cycle								
5	Year of Study:	4								
6	Semester:	7								
7	ECTS Credits Allocated:	6.00								
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:	Learning, to make a solution of any problem step by step.								
19	Contribution of the Course to Professional Development:	To be able to practice the professional applications of mathematical and geometric concepts with using computer.								
20	Learning Outcomes:									
		1	Knows the concept of the algorithm.							
		2	Knows the differences between the algorithm and flow chart.							
		3	Knows to use loop in algorithm and flow chart.							
		4	May use the sequences and series for developing algorithm.							
		5	Knows to make an algorithm about squared matrices, vectors given in multi-dimensional spaces, multiplication of all the elements of a matrix on the main axis.							
		6	Learns the make an algorithm for finding the biggest element of finite sequences and evaluate which one is that element.							
		7	Students can create an algorithm and flow diagrams for finding that how many prime numbers among the given numbers.							
		8	Students can create an algorithm for calculating the modules and arguments and also find the correspondence in polar form of a given complex number.							
		9								
		10								
21	Course Content:									
		Co	ourse Content:							
Week			Practice							
1	Description of course.									

23 TERM	Assesment LEARNING ACTIVITIES NUMBE	WEIGHT
ZZ	Materials:	Vatansever, Seçkin Yayınevi, 6. Baskı, 2007, Ankara. 2)Açıklamalı Algoritma Soruları ve Çözümleri, Yük.Bilg.Müh. Deniz Mertkan Gezgin, Kriter Yayınevi, 2008, İstanbul.
22	Textbooks, References and/or Other	1)Algoritma Geliştirme ve Programlamaya Giriş, Dr. Fahri
14	number. Feedback	
13	Creating the algorithm which calculates the modules and arguments and also find the corresponding polar form of a given complex	
12	Creating the algorithm and the flow chart solving the linear equations system which consist three unknowns and three equations. Creating the algorithm and the flow chart solving the linear equations system which consist two unknowns and three equations.	
11	Give the flow chart and algorithm that calculates the integral of cosinus power. For the given continuous function on a closed interval constructing the algorithm and flow chart for finding the Riemann sums.	
10	For finite sets A and B give the algorithm and flow chart for counting; the number of relations from A to B; the number of functions from A to B, one to one functions from A to B; onto functions from A to B chart of the algorithm and finds the number of functions. Constructing an algorithm and flow chart for finding circumferences of trapezoid which's corner points in the plane are given.	
9	Midterm and feedback	
8	Creating the algorithms and the flow chart that find; the number of primes among the first 500 positive integers; the limits of a rational functions which's numerator and denumerator are polynomial where variable approach a finite number.	
7	Creating an algorithm finding how many right angled triangles are found with integer length orthogonal sides maximum 6, and hypotenuse of right triangles greater than 6. Find the greatest element of a finite sequences and create the algorithm and the flow chart calculates the count of the greatest element.	
6	Creating the algorithms and flow charts; for perpendicularity of any two vectors in multi-dimensional spaces, for multiplication of all the elements on the main axis of a matrix, finding is the square matrices symmetric or inverse.	
5	Operations with sequences and series.	
4	Loops in algorithm and loops in flow chart.	
3	Mathematical Problem Solving. Differences between the flow chart and algorithm.	
2	What is the algorithm? The differences between the algorithm in Computer Programming and the algorithm in	

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 Success Grade	es to	40.00				
Contribution of Final Exam to Success Grade)	60.00				
Total		100.00				
Measurement and Evaluation Techniques Us Course	ed in the	Homeworks and online exams				
24 ECTS / WORK LOAD TABLE						

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	3.00	42.00
Practicals/Labs	0	0.00	0.00
Self study and preperation	14	9.00	126.00
Homeworks	0	0.00	0.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	7.00	7.00
Others	0	0.00	0.00
Final Exams	1	5.00	5.00
Total Work Load			180.00
Total work load/ 30 hr			6.00
ECTS Credit of the Course			6.00

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	0	4	5	2	0	1	4	2	4	4	0	0	0	0	0	0
ÖK2	3	5	5	2	0	1	4	2	4	4	0	0	0	0	0	0
ÖK3	4	5	5	3	0	1	4	3	4	4	0	0	0	0	0	0
ÖK4	2	3	5	2	0	1	4	2	4	4	0	0	0	0	0	0
ÖK5	2	4	5	2	0	1	4	2	4	4	0	0	0	0	0	0
ÖK6	2	3	5	3	0	1	4	3	4	5	0	0	0	0	0	0
ÖK7	2	4	5	3	0	1	4	2	4	4	0	0	0	0	0	0
ÖK8	1	3	5	2	0	1	4	2	4	4	0	0	0	0	0	0
	LO: Learning Objectives PQ: Program Qualifications															

Contrib	1 very low	2 low	3 Medium	4 High	5 Very High
ution					
Level:					