ALGORITHM AND PROGRAMMING

1	Course Title:	ALGORITHM AND PROGRAMMING	
2	Course Code:	İMÖ2006	
3	Type of Course:	Compulsory	
4	Level of Course:	First Cycle	
5	Year of Study:	2	
6	Semester:	4	
7	ECTS Credits Allocated:	2.00	
8	Theoretical (hour/week):	2.00	
9	Practice (hour/week):	0.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:		
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Dr. Ögr. Üyesi BAHTİYAR BAYRAKTAR	
15	Course Lecturers:		
16	Contact information of the Course Coordinator:	E-mail: bbayraktar@uludag.edu.tr, İş Tel: +90(224) 294 22 98. Adres: UÜ, Eğitim Fakültesi, İlköğretim Bölümü, Matematik Eğitimi Anabilim Dalı, 16059 Görükle / BURSA	
17	Website:		
18	Objective of the Course:	The purpose of the course is to understand the basics of mathematical modeling in comprehensive manner. Also the goal is to learn the basics of algorithm and to be able to use them on computer. To gain skills in producing of practice tasks in Maths lessons. To understand the basics of software languages.	
19	Contribution of the Course to Professional Development:	Creates and develops the knowledge base of the prospective teacher. Comprehends the concepts related to the field and the relations between concepts based on the competencies gained in secondary education. Have defines and analyzes problems related to his field, and develops solutions based on evidence and research.	
20	Learning Outcomes:		
		1	Terms of building mathematical models to analyze the problem;
		2	Creation mathematical models and solution methods implementation of some of the problems from our daily lives,;
		3	Creation a simple linear mathematical model.;
		4	Definition of algorithm and concept of the algorithm. Learning of the must-have features of algorithms.;
		5	Drawing flow diagram and testing algorithm.;
		6	Software development of algorithms for arrays and matrices.;
		7	Development of numerical methods and software algorithms that were seen in mathematics course.;
		8	
		9	
		10	
21	Course Content:		

	Course Content:	
Week	Theoretical	Practice
1	Algorithm concept, introduction and properties. Examples of algorithms. Basic structures of algorithms.	
2	Designing ways of algorithms. Algae Flow charts.	
3	Basic structures of algorithms. Examples.	
4	Basic structures of algorithms. Examples.	
5	Flowchart symbols and basic structures of algorithms (linear, branching and loop algorithms). Complex algorithms and functions. Algorithm applications.	
6	Software language. Structure of a computer language (its alphabet, special words, expressions, rules, appearance).	
7	Application of linear algorithms. Software Applications	
8	Application of branching algorithms. Software Applications	
9	Application of branching algorithms. Software Applications	
10	Application of algorithms in loop form. Software Applications	
11	Application of algorithms in loop form.	
13	Algorithms and software on arrays and matrices. Software Applications	
	matrices. Software Applications	
	Materials:	2.http://www.hakankör.com.tr/Algoritma.pdf 3.Ders notları.

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	2.00	28.00
Practicals/Labs	0	0.00	0.00
Self study and preperation	0	0.00	0.00
Homeworks	0	0.00	0.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	15.00	15.00
Others	0	0.00	0.00
Final Exams	1	15.00	15.00
Total Work Load			73.00
Total work load/ 30 hr			1.93
ECTS Credit of the Course			2.00

TERM LEARNING ACTIVITIES	NUMBER	WEIGHT
Quiz	0	0.00
Final Exam	1	60.00

Contribution of Term (Year) Learning Activities to Success Grade	40.00
Contribution of Final Exam to Success Grade	60.00
Total	100.00
Measurement and Evaluation Techniques Used in the Course	Techniques such as lecture, discussion, question-answer, 3E are used in the teaching of the course. Midterm and final exams are taken into consideration in the measurement and evaluation of the course.

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	4	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0
ÖK2	4	4	2	4	0	0	0	0	0	0	0	0	0	0	0	0
ÖK3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK7	0	0	0	0	0	0	0	0	0	0	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**				