PROGRAMMING I

1	Course Title:	PROGRAMMING I	
2	Course Code:	MAT4115	
3	Type of Course:	Optional	
4	Level of Course:	First Cycle	
5	Year of Study:	4	
6	Semester:	7	
7	ECTS Credits Allocated:	4.00	
8	Theoretical (hour/week):	3.00	
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:		
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	Modeling concept. What is a mathematical modeling? Establishment of the mathematical model. Solution of mathematical model. Examples of mathematical models.	
2	Problem solving and mathematical modeling. Model and solutions of some problems in our daily life.	
3	Application of numerical test methods (application of approximate calculations in mathematics lessons).	
4	Algorithm concept and introduction of algorithm. Features that should be in the algorithm. Algorithm design.	
5	Flowchart diagrams and basic structures of algorithms (linear, branching and looping algorithms). Complex algorithms and functions. Algorithm applications.	
6	Software is language. The structure of a computer language (alphabet, special words, expressions, rules, appearance).	
7	Application of linear algorithms. Software Applications	
8	Implementation of branching algorithms. Software Applications	
9	Implementation of branching algorithms. Software Applications	
10	Implementation of looped algorithms. Software Applications	
11	Implementation of looped algorithms. Software Applications	
12	Implementation of looped algorithms.Software Applications	
13	Algorithms and software on arrays and matrices. Software Applications	
14	Algorithms and software on arrays and matrices. Software Applications	

22	Textbooks, References and/or Other Materials:	1.http://web.firat.edu.tr/kimmuh/eskiweb/kimya/model.htm 2.http://www.hakankör.com.tr/Algoritma.pdf 3.Ders notları.
23	Assesment	

TERM LEARNING ACTIVITIES	**NUMBER**	**WEIGHT**
Midterm Exam	0	0.00
Quiz	0	0.00
Home work-project	10	50.00
Final Exam	1	50.00
Total	11	100.00
Contribution of Term (Year) Learning Activities to Success Grade		50.00
Contribution of Final Exam to Success Grade		50.00
Total		100.00
Measurement and Evaluation Techniques Used in the Course		

24	**ECTS / WORK LOAD TABLE**

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	12	5.00	60.00
Homeworks	8	4.00	32.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	0	0.00	0.00
Others	0	0.00	0.00
Final Exams	1	1.00	1.00
Total Work Load			121.00
Total work load/ 30 hr			4.03
ECTS Credit of the Course			4.00

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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK2	0	0	0	0	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**