ADVANCED MATHEMATICS

1	Course Title:	ADVANCED MATHEMATICS
2	Course Code:	BLPZ102
3	Type of Course:	Compulsory
4	Level of Course:	Short Cycle
5	Year of Study:	1
6	Semester:	2
7	ECTS Credits Allocated:	5.00
8	Theoretical (hour/week):	3.00
9	Practice (hour/week):	1.00
10	Laboratory (hour/week):	0
11	Prerequisites:	None
12	Language:	Turkish
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Öğr. Gör. Dr. ABDURRAHMAN DAYIOĞLU
15	Course Lecturers:	
16	Contact information of the Course Coordinator:	dayioglu@uludag.edu.tr
17	Website:	
18	Objective of the Course:	To be able to gain programmer logic, one learns mathematical concepts.
19	Contribution of the Course to Professional Development:	As a programmer, one learns the necessary mathematical concepts in detail to develop algorithms.
20	Learning Outcomes:	

	1	Gains detailed knowledge of polynomials and factorization.
	2	Will be able to make applications related to Functions.
	3	Will be able to make applications related to the coordinate plane.
	4	Better understands the loop logic that it may encounter in algorithms.
	5	Gains knowledge of matrices that can be encountered in Machine Learning.
	6	Gain knowledge of subjects such as determinants and series that may be encountered while working on artificial intelligence and big data.
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21 Course Content:

Course Content:

Week	Theoretical	Practice
1	Course introduction and Polynomials	
2	Factorization	
3	Coordinate Plane and Analytics of the Point	
4	Analytics of the Line	

5	Relation and Function	
6	Inverse and Composite Function	
7	Graphs of Functions	
8	Parabola	
9	Inequalities	
10	Matrices	
11	Determinants	
12	Logarithm	
13	Sequences and Series	
14	Trigonometric Functions	

22	Textbooks, References and/or Other Materials:	Prof. Dr. Basri Çelik, Temel Matematik, Dora Yayınevi,2016 Prof. Dr. Basri Çelik, Mesleki Matematik, Dora Yayınevi,2017
23	Assesment	

TERM LEARNING ACTIVITIES	**NUMBER**	**WEIGHT**
Midterm Exam	1	40.00
Quiz	0	0.00
Contribution of Term (Year) Learning Activities to Success Grade		40.00
Contribution of Final Exam to Success Grade		60.00
Measurement and Evaluation Techniques Used in the Course		Relative evaluation

24	**ECTS / WORK LOAD TABLE**			
	Activites	Number	Duration (hour)	Total Work Load (hour)
	Theoretical	14	3.00	42.00
	Practicals/Labs	14	1.00	14.00
	Self study and preperation	14	4.00	56.00
	Homeworks	14	2.00	28.00
	Projects	0	0.00	0.00
	Field Studies	0	0.00	0.00
	Midterm Exams	1	4.00	4.00
	Others	0	0.00	0.00
	Final Exams	1	6.00	6.00
	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	5	4	3	2	4	5	5	2	2	2	0	0	0	0	0	0
ÖK2	5	5	3	2	3	5	5	2	2	2	0	0	0	0	0	0
ÖK3	4	4	2	2	3	4	4	2	2	2	0	0	0	0	0	0
ÖK4	5	5	4	2	3	5	5	2	2	2	0	0	0	0	0	0

ÖK5	5	5	3	5	5	5	3	2	2	2	0	0	0	0	0	0
ÖK6	5	5	4	5	4	5	5	2	2	2	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**