	TEACHING OF ALGEBRA									
1	Course Title:	TEACHI	NG OF ALGEBRA							
2	Course Code:	İMÖ3008	3							
3	Type of Course:	Compuls	sory							
4	Level of Course:	First Cyc	le							
5	Year of Study:	3								
6	Semester:	6								
7	ECTS Credits Allocated:	4.00								
8	Theoretical (hour/week):	2.00								
9	Practice (hour/week):	2.00								
10	Laboratory (hour/week):	0								
11	Prerequisites:	None								
12	Language:	Turkish								
13	Mode of Delivery:	Face to f	ace							
14	Course Coordinator:	Prof. Dr.	DİLEK SEZGİN MEMNUN							
15	Course Lecturers:	Prof.Dr.	Dilek SEZGİN MEMNUN							
16	Contact information of the Course Coordinator:	Prof.Dr. Dilek SEZGİN MEMNUN Adres: Bursa Uludağ Üniversitesi Eğitim Fakültesi, Matematik ve Fen Bilimleri Eğitimi Bölümü, Matematik Eğitimi Anabilim Dalı, E-235 16059 Görükle / Bursa E-Mail:dsmemnun@uludag.edu.tr								
17	Website:									
18	Objective of the Course:	Examining the historical development of algebra, identifying and discussing algebra topics in the curriculum, examining the learning difficulties and misconceptions encountered by students, evaluating the role of technology in learning and teaching algebra, introducing and applying the methods used in learning and teaching algebra.								
19	Contribution of the Course to Professional Development:	Experien classroo	ce will be gained regarding different teaching methods and m applications of algebra subjects.							
20	Learning Outcomes:									
		1	Gains knowledge about the pre-algebra period and the historical development of Algebra.							
		2	Gains knowledge of algebraic thinking, the dimensions and development of algebraic thinking. Understands the importance of algebraic thinking in mathematics teaching. Associates Algebra subjects with daily life and other courses. Understands the relationship between arithmetic and Algebra, generalized arithmetic and the importance of functional thinking.							
		3	Knows the different methods and approaches of teaching Algebra subjects. Evaluates the use of technology in algebra teaching and learning. Understand how to create learning environments that support algebra teaching and learning.							
		4	Becomes aware of affective properties in teaching and learning algebra, learning difficulties encountered in Algebra, misconceptions and solutions. Knows the subjects of Algebra in the curriculum.							
		5	Teaches algebraic expression and variable concept in Algebra teaching.							
		6	Teaches the concepts of equality and identical transformation in Algebra teaching.							

		7	Teaches the concept of equation and inequality in Algebra teaching.							
		8	Teaches linear relations teaching.	s and linear equations in Algebra						
		9	Understands the relationship between Algebra learning area and patterns. Knows the place of patterns in the curriculum. Knows student mistakes and misconceptions in learning the concept of pattern.							
		10	Understands functional thinking and functional thinking in curriculum. Makes the teaching of functional thinking and understands the place of technology in teaching functional thinking.							
21	Course Content:									
		Co	urse Content:							
Week	Theoretical		Practice							
1	Explanation of course rules and proc resources. The pre-algebra period ar historical development of Algebra.	essing, nd the								
2	Algebraic thinking, dimensions and development of algebraic thinking. Re algebra subjects with daily life and ot courses. The relationship between ar and algebra, the importance of gener arithmetic and functional thinking.	elating of her ithmetic alized								
3	Different methods and approaches for teaching Algebra topics. The use of	or na of								
Activit	es		Number	Duration (hour)	Total Work Load (hour)					
Th dore	Tealbe aware of affective properties in	1	14	3.00	42.00					
Practic	als/Labs		0	0.00	0.00					
Self stu	misconceptions and solutions. To exa by and preperation	amine um	10	5.00	50.00					
Homew	vorks		1	10.00	10.00					
Project	expression in teaching algebra. The p	place of	0	0.00	0.00					
Field S	tudies		0	0.00	0.00					
Midtern	personal second se		1	6.00	6.00					
Others			0	0.00	0.00					
Final E	The place of the concept of variable i	n daily	1	12.00	12.00					
Total W	Vork Load				126.00					
Total w	GIRLIGATION CONCEPT OF Algebraic or	ne.			4.00					
ECISO	Credit of the Course	<u> </u>			4.00					
6	The concept of equality in teaching a The place of the equality concept in t curriculum, Algebra learning and its relationship with other learning areas Difficulties and misconceptions encou in teaching the concept of equality. T of the concept of equality in daily life relation with other courses. Arranging content and activity applications for th concept of equality. Teaching the cor equality in Algebra instruction.	Igebra. he untered he place and its g course ne ncept of								

7	The identical transformation in teaching algebra. The place of the identical transformation in the curriculum, Algebra learning and its relationship with other learning areas. Difficulties and misconceptions encountered in teaching the identical transformation.	
8	The place of the identical transformation in daily life and its relation with other courses. Arranging course content and activity applications for the identical transformation. Teaching the identical transformation in Algebra instruction.	
9	The concept of equation in teaching algebra. The place of the equation concept in the curriculum, Algebra learning and its relationship with other learning areas. Difficulties and misconceptions encountered in teaching the concept of equation.	
10	The place of the concept of equation in daily life and its relation with other courses. Arranging course content and activity applications for the concept of equation. Teaching the concept of equation in Algebra instruction.	
11	The concept of inequality in teaching algebra. The place of the inequality concept in the curriculum, Algebra learning and its relationship with other learning areas. Difficulties and misconceptions encountered in teaching the concept of inequality. The place of the concept of inequality in daily life and its relation with other courses. Arranging course content and activity applications for the concept of inequality. Teaching the concept of inequality in Algebra instruction.	
12	The concept of linear equations in teaching algebra. The place of the linear equations in the curriculum, Algebra learning and its relationship with other learning areas. Difficulties and misconceptions encountered in teaching the linear equations. The place of the linear equations in daily life and its relation with other courses. Arranging course content and activity applications for the linear equations. Teaching the linear equations in Algebra instruction.	
13	Algebra learning and its relationship with patterns. The place of patterns in the curriculum. The concept of pattern, student mistakes and misconceptions in teaching the pattern.	
14	Functional thinking, the place of functional thinking in curriculum. Teaching of functional thinking and the role of technology in teaching functional thinking.	

	22	Textbooks, References and/or Other Materials:	Sarpkaya-Aktaş, G. (Ed). Uygulama Örnekleriyle Cebirsel Düşünme ve Öğretimi. Ankara:Pegem Akademi. Bingölbali, E. & Özmantar, M.F. İlköğretimde Karşılaşılan Zorluklar ve Çözüm Önerileri. Ankara:Pegem Akademi. Dede, Y., Doğan, M.F. ve Aslan-Tutak, F. (Eds.) Matematik eğitiminde etkinlikler ve uygulamaları. Anakara: Pegem Akademi. Ün-Açıkgöz, K. Aktif öğrenme. İzmir:Biliş. Arseven, A. Matematik öğretim yöntemleri. Ankara: pegem Akademi. Özmantar, M.F., Akkoç, H., Kuşdemir-Kayıran, B. ve Özyurt, M. (Eds.) Ortaokul matematik öğretim programları: Tarihsel bir inceleme. Ankara: Pegem Akademi. Çorlu, s. ve Çallı, E. STEM Kuram ve uygulamaları. Öğretmenler için temel kılavuz. Ankara: Pusula Yayıncılık. Van de Walle, J.A., SKarp, K.S. (Durmuş S. (Çeviri Ed)). İlkokul ve ortaokul matematiği. Gelişimsel yaklaşımla öğretim. Ankara: Nobel akademik yayıncılık.
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TERM LEARNING ACTIVITIES	NUMBE R	WEIGHT					
Midterm Exam	1	15.00					
Quiz	0	0.00					
Home work-project	2	25.00					
Final Exam	1	60.00					
Total	4	100.00					
Contribution of Term (Year) Learning Activitie Success Grade	es to	40.00					
Contribution of Final Exam to Success Grade	Э	60.00					
Total		100.00					
Measurement and Evaluation Techniques Us Course	sed in the	Participation in mid-term and final exams and in-class studies are taken into account in the measurement and evaluation of the course. The success at the end of the evaluation is made in the form of relative evaluation.					

24 ECTS / WORK LOAD TABLE

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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	2	3	3	4	5	4	3	3	3	2	1	3	4	3	1	2
ÖK2	3	2	3	2	3	3	4	3	3	4	2	3	3	2	3	4
ÖK3	1	5	1	3	1	2	1	1	2	1	1	1	1	5	4	4
ÖK4	1	2	3	1	4	5	1	1	4	5	2	1	1	1	1	5
ÖK5	4	5	3	3	3	4	4	5	4	3	5	1	1	5	4	4
ÖK6	4	4	3	4	3	4	4	5	4	3	4	1	1	5	4	4
ÖK7	5	4	3	4	3	4	4	4	4	3	4	1	1	5	4	4
ÖK8	5	4	3	3	4	4	4	5	4	3	4	1	1	4	4	4

ÖK9	4	5	3	4	3	5	4	4	4	3	1	1	1	5	5	4
ÖK10	5	5	5	4	4	4	4	4	4	4	1	1	1	5	5	5
	LO: Learning Objectives PQ: Program Qualifications															
Contrib 1 very low ution Level:		2	2 Iow		3	Medi	um		4 Higl	h	5 Very High					