Course Syllabus

Code - Course Title	**MTE522 - Teaching Algebra**
Course Type	II. SEMESTER
Laboratory + Practice	3+0
ECTS	**6.0**
Language of Instruction	Türkçe
Course Type	Elective Courses
Course Instructor(s)	PROF. DR. DİLEK TANIŞLI

Mode of Delivery	This course will be given by distance education system.
Prerequisites	There is no prerequisite or co-requisite for this course.
Courses Recomended	There is no recommended optional programme component for this course.
Recommended Resources	Blanton, M.L. (2008). Algebra and The Elementary Classroom. Transforming thinking, Transforming Practice. Heinemann, NH.Driscoll, M., 1999. Fostering Algebraic Thinking: A Guide for Teachers, Grades 6-10, Portsmouth, NH: Heinemann.Kieran, C., 1992. The Learning and Teaching of School Algebra. In D.A. Grouws (Eds.). Handbook of Research on Mathematics Teaching and Learning, 390-419. New York: Macmillan.Van de Walle, J., Karp, K. ve Bay-Williams, J. (2016). İlkokul ve ortaokul matematiği: Gelişimsel yaklaşımla öğretim.(S. Durmuş, Çev.). Ankara: Nobel Akademik. (Orijinal baskı, 2009).
Work Placement	N/A

Course Syllabus

Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 1		Historical development of algebra; Arithmetic and Algebra	
Week - 2		The Transition From Arithmetic to Algebra	
Week - 3		Algebraic Thinking	
Week - 4		Algebraic Habits of the Mind	
Week - 5		Approaches in Algebra Instruction	
Week - 6		Approaches in Algebra Instruction	
Week - 7		Difficulties in Learning and Teaching Algebra and Misconceptions	
Week - 8		Meaning of equal signals and relational thinking	
Week - 9		Pattern and Generalization	
Week - 10		Concept of variables, Algebraic Expressions, Identities	

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Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 11		Inequalities and Equations	
Week - 12		Linear Relationship and Slope	
Week - 13		Function Concept	
Week - 14		Usage of Computer Algebra Systems (BCS) Software in Algebra Teaching	

Learning Outcomes

#	Learning Outcome
1	Interprets the historical development of algebra.
2	Analyzes the relationship between arithmetic and algebra.
3	Contruct transition from arithmetic to algebra.
4	Analyzes the algebraic thinking
5	Analyzes the algebraic habits of the mind.
6	Design a teaching plan for the acquisition of algebraic habits of mind in problem situations.
7	Analyzes different approaches in algebra teaching.
8	Analyzes the difficulties and misconceptions in learning algebra.
9	Analyzes the relationship between the basic concepts in the algebra and teaching.
10	Designs instructional plans for basic concepts in algebra
11	Evaluates teaching plans related to basic concepts in algebra.
12	Uses Computer Algebra Systems (BCS) Software in algebra teaching.

Sustainable Development Goals

No content has been provided.

Course Theme

No content has been provided.

AKTS Workload

Activity	Duration (Hour)	Count	Workload
Teorik Derse Katılım	0	0	0
Sınıf Dışı Çalışma (Ön Hazırlık & Pekiştirme Amaçlı)	0	0	0
Ödevler	0	0	0
Proje - Rapor - Sunum Hazırlama	0	0	0
Ara Sınav Hazırlığı (sınav süresi dahil)	0	0	0
Final Sınavı Hazırlığı (sınav süresi dahil)	0	0	0

AKTS Workload

Activity	Duration (Hour)	Count	Workload
Uygulama (Laboratuvar, Müzik/Enstrüman Uygulaması, Atölye/Saha Çalışması vb.)	0	0	0
Staj Uygulaması	0	0	0
		Calculated ECTS	**0**

Assessment Method and Passing Requirements

No content has been provided.