Course Syllabus

Code - Course Title	**MTE521 - Learning Difficulties and Misconceptions in Mathematics**
Course Type	I. SEMESTER
Laboratory + Practice	3+0
ECTS	**6.0**
Language of Instruction	Türkçe
Course Type	Elective Courses
Course Instructor(s)	PROF. DR. EMEL ÖZDEMİR ERDOĞAN

Mode of Delivery	Distance education
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	¥ Akman, B. (2017) Okul öncesi Matematik Eğitimi, Pegem A Yayıncılık ¥ Altun M. (2014), Ortaokullarda Matematik Öğretimi 5-6-7 ve 8. Sınıflar için Pegem Yayıncılık¥ AltunM.(2014) Liselerde Matematik Öğretimi, Alfa Aktüel Yayınları¥ Baykul Y. (2005) İlköğretimde matematik öğretimi, Pegem A yayıncılık ¥ Smith, S.S. (2016) Erken Çocuklukta Matematik, çeviri Editörü: Erdoğan S. , Pearson- Eğiten kitap ¥ Ülgen, G. (2001). Kavram Geliştirme, Ankara: Pegem A Yayıncılık. ¥ Van De Walle, A. J., Karp, S. K., & Bay-Williams, M. J. (2012). İlkokul ve ortaokul matematiği gelişimsel yaklaşımla öğretim (7. Baskıdan) (Çev. Ed. S. Durmuş). Ankara: Nobel Akademik Yayıncılık.
Work Placement	N/A

Course Syllabus

Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 1		What is the Concept? :Definition of concepts and their properties, Concept Theories, Classification of Concepts, Concept Development Processes	
Week - 2		Concept Learning and Teaching, Concept Learning as Product, Concept Learning as Process, Concept Teaching Models	
Week - 3		Development of Mathematical Concepts: Development of mathematical concepts in pre-school level	
Week - 4		Development of Mathematical Concepts:Development of mathematical concepts in primary and secondary level	
Week - 5		Definitions of Mathematical Concepts: Defining mathematical concepts, Definition criteria, Definition of mathematical concepts in education	
Week - 6		What is the Misconception ?: Definition of concept misconceptions, misconceptions types	
Week - 7		Reasons of Mathematical Misconceptions: Epistemological reasons, Psychological reasons, Pedagogical reasons	
Week - 8		Learning Difficulties and Misconceptions in Numbers	

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Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 9		Learning Difficulties and Misconceptions in Fraction	
Week - 10		Learning Difficulties and Misconceptions in Ratio	
Week - 11		Learning Difficulties and Misconceptions in Symmetry	
Week - 12		Learning Difficulties and Misconceptions in Measurement and Probability	
Week - 13		Learning Difficulties and Misconceptions in Function	
Week - 14		Overcoming Mathematical Misconceptions and Current Studies	

Learning Outcomes

#	Learning Outcome
1	Explain the concept
2	Exemplify concept learning and teaching processes
3	Interprets the development process of mathematical concepts
4	Explains misconceptions in mathematics
5	Interpret the causes of the misconceptions of mathematical concepts
6	Explain the misconceptions of some basic mathematical concepts

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
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.

Assessment Method and Passing Requirements	Quamtity	Percentage (%)
1.Midterm Exam	1	40
Final Exam	1	60
	Sum (%)	**100**