Course Syllabus

Code - Course Title	**MTE616 - Mathematics and Art**
Course Type	II. SEMESTER
Laboratory + Practice	3+0
ECTS	**7.5**
Language of Instruction	Türkçe
Course Type	Elective Courses
Course Instructor(s)	PROF. DR. TUBA ADA

Mode of Delivery	The mode of delivery of this course is Face to face
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	RODIN, E. Y. (1993). The visual mind: Art and mathematics. MIT Press, Cambridge, MA., Gardiner, A., & Gardiner, A. D. (1987). Discovering mathematics: The art of investigation. Oxford University Press., Hickman, R., & Huckstep, P. (2003). Art and mathematics in education. Journal of Aesthetic Education, 37(1), 1-12.
Work Placement	N/A

Course Syllabus

Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 1		What is mathematics: The Nature of Mathematics	
Week - 2		Is Mathematics discovered or invented?	
Week - 3		What is Art: The Relationship Between Art and Mathematics	
Week - 4		Place of Art in Mathematics Education: The Assumptions, Values, and Vision of Mathematics Education	
Week - 5		Aesthetic Relationship between Mathematics and Art	
Week - 6		Drawing-Geometric Shape	
Week - 7		Spatial Ability: Spatial Visualization	
Week - 8		Spatial Ability: Spatial orientation	
Week - 9		Geometric Transformations: Translations and reflections	
Week - 10		Geometric Transformations: Rotation	
Week - 11		Pattern and Tesselations	
Week - 12		Geometric Reasoning:The Theory of Figural Concepts	

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Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 13		Geometric Reasoning: Duval's Cognitive Model	
Week - 14		Origami	

Learning Outcomes

#	Learning Outcome
1	The researchers/students will be able to define mathematics
2	The researchers/students will be able to define art.
3	The researchers/students will be able to determine the place of art in mathematics education.
4	The researchers/students will be able to explain the relationship between mathematics and aesthetics of art.
5	The researchers/students will be able to explain the similarities and differences between drawing and geometric shapes.
6	The researchers/students will be able to explain the components of Spatial Ability.
7	The researchers/students will be able to explain geometric transformations.
8	The researchers/students will be able to define the pattern and tessellation.
9	The researchers/students will be able to define geometrical reasoning.
10	The researchers/students will be able to define the origami.

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.