Course Syllabus

Code - Course Title	**MTE526 - Discovery with Dynamic Geometry Software**
Course Type	II. SEMESTER
Laboratory + Practice	3+0
ECTS	**6.0**
Language of Instruction	Türkçe
Course Type	Elective Courses
Course Instructor(s)	PROF. DR. NİLÜFER KÖSE

Mode of Delivery	Distance education
Prerequisites	There is no prerequisite or co-requisite for this course.
Courses Recomended	-
Recommended Resources	• Baki, A. (2001). Bilişim Teknolojisi Işığı Altında Matematik Eğitiminin Değerlendirilmesi, Milli Eğitim Dergisi, 149. http://dhgm.meb.gov.tr/yayimlar/dergiler/Milli_Egitim_Dergisi/149/baki.htm • Goldenberg, E.P.& Cuoco, A.A. (1998). What is dynamic geometry. R. Lehrer and D. Chazan (Eds.), Designing learning environments for developing understanding of geometry and space içinde (s. 351-367). Mahwah, NJ: Lawrence Erlbaum Associates. • Güven, B., & Karataş, İ. (2005). Dinamik geometri yazılımı Cabri ile oluşturmacı öğrenme ortamı tasarımı: Bir model. İlköğretim Online, 4(1), 62-72.• Köse, N. Y. (2008). İlköğretim 5. Sınıf Öğrencilerinin Dinamik Geometri Yazılımı Cabri Geometriyle Simetriyi Anlamlandırmalarının Belirlenmesi: Bir Eylem Araştırması. Anadolu Üniversitesi, Eskişehir.• Köse, N. Y., & Özdaş, A. (2009). İlköğretim 5. Sınıf Öğrencileri Geometrik Şekillerdeki Simetri Doğrularını Cabri Geometri Yazılımı Yardımıyla Nasıl Belirliyorlar?. İlköğretim Online, 8(1), 159-175.• Köse, N. Y., Tanışlı, D., Erdoğan, E. Ö. ve Ada, T. (2012). İlköğretim matematik öğretmen adaylarının teknoloji destekli geometri dersindeki geometrik oluşum edinimleri, Mersin Üniversitesi Eğitim Fakültesi Dergisi, 8(3), 102-121.• Köse, N. Y., Uygan, C. ve Özen, D. (2012). Dinamik geometri yazılımlarındaki sürükleme ve çeşitlerinin geometri öğretimindeki rolü, Türk Bilgisayar ve Matematik Eğitimi Dergisi-TÜRKBİLMAT, 3 (1), 35-52.• Laborde, C. (2001). Intergration of technology in the design of geometry tasks with Cabri-Geometry. International Journal of Computers for Mathematical Learning, 6, 283-317.• Laborde, C., Kynigos, C., Hollebrands, K., & Strasser, R. (2006). Teaching and learning geometry with technoloy. In A. Gutiérrez & P. Boero(Eds.), Handbook of Research on The Psychology of Mathematics Education: Past, Present and Future. (pp. 275-304).Rotterdam: Sense Publishers.• Manouchehri, A., Enderon, M. C., & Pugnucco, L. A. (1998). Exploring geometry with technology. Mathematics Teaching in the Middle School, 3, 436-442.• Moyer, T. O. (2003). An investigation of the geometer's sketchpad and van Hiele levels. Dissertation Abstract International, 64 (11), 184. • Ng, K.E.D., & Teong, S. K. (2003). The geometer's sketchpad for primary geometry: A framework. Micromath, 19 (3), 5-9.• Sinclair, N., & Crespo, S. (2006). Learning mathematics in dynamic computer environments. Teaching Children Mathematics, 9(12), 437-444.• Olkun, S., Gülbağcı, H., Öztürk, B. Açıkgöz, S., Kandemir, M. A., & Çakmaktepe, M. (2008). Dinamik Geometri Yazılımları ile Geometri Etkinlikleri. Ankara: Maya Akademi• Özen, D. ve Köse, N. Y. (2013). Investigating pre-service mathematics teachers' geometric problem solving process in dynamic geometry environment. Turkish Online Journal of Qualitative Inquiry, 4(3), 61-74.

Course Syllabus

Weeks	Learning Outcomes	Topics	Teaching Methods

Course Syllabus

Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 1		What is dynamic geometry software? What are the characteristics?	
Week - 2		General presentation of dynamic geometry software	
Week - 3		Classroom atmosphere	
Week - 4		Representation of basic tools.	
Week - 5		Representation of measurement	
Week - 6		Construction tools	
Week - 7		Constructions	
Week - 8		Discoveries on the circle	
Week - 9		Discoveries on the triangles	
Week - 10		The discovery of symmetry	
Week - 11		The discovery of transformations	
Week - 12		Dragging	
Week - 13		Geometry and art	
Week - 14		Analyzing and designing real-life problems	

Learning Outcomes

#	Learning Outcome
1	Uses the Cabri Geometry software, which is one of the dynamic geometry softwares
2	Evaluates of learning environments from the viewpoint of students and teachers.
3	Analyze properties of geometric concepts and geometric relationships using of Cabri Geometry Software.
4	Evaluates the problem solving processes carried out through the Cabri Geometry software.
5	Evaluates researches that explores the discovery of various geometric concepts using the Cabri Geometry software.
6	Participate in discussions about the geometric concepts of Cabri Geometry software and its role in exploration.
7	Evaluate the importance of dynamic geometry software in the teaching-learning process of mathematics education.

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.