



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Technology Assisted Geometry Instruction							
Course Code		MTE522		Course Level		Second Cycle (Master's Degree)			
ECTS Credit	8	Workload	200 (<i>Hours</i>)	Theory	3	Practice	0	Laboratory	0
Objectives of the Course		The aim of this course is to use technology effectively on teaching geometry							
Course Content		Teaching computer technologies to be used in teaching geometry and designing materials in dynamic geometry environment							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Demonstration, Discussion, Individual Study, Problem Solving					
Name of Lecturer(s)									

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	30
Final Examination	1	70

Recommended or Required Reading

1	1. Bintaş, J. ve Akıllı, B. (2008). Bilgisayar Destekli Geometri. Ankara: Pegem Yayıncılık
2	2. Doğan, M. ve Karakırık, E. (2013). Matematik Eğitiminde Teknoloji Kullanımı. Ankara: Nobel Yayıncılık
3	3. Bülbül, M.Ş. ve diğerleri. (2013). İğneli Sayfa Cebir Uygulamaları. Ankara: Pegem Yayıncılık.

Week	Weekly Detailed Course Contents	
1	Theoretical	Investigating media to be used in teaching mathematics,
2	Theoretical	Introducing 2D and 3D dynamic geometry software,
3	Theoretical	The difference between figure and construct
4	Theoretical	Forming dynamic constructs
5	Theoretical	Forming dynamic constructs
6	Theoretical	Using dynamic geometry software to solve problems
7	Theoretical	Using dynamic geometry software to solve problems
8	Intermediate Exam	MIDTERM
9	Theoretical	Constructing theorems about triangles (the sum of the interior angles, Euler line, Napoleon's Triangle, Morley Theorem)
10	Theoretical	Constructing theorems about quadrilaterals (inscribed quadrilateral, angle bisectors in a quadrilateral, etc.)
11	Theoretical	Constructing theorems about quadrilaterals (constructions of special quadrilaterals etc.)
12	Theoretical	Quadrilaterals formed by connecting midpoints of any quadrilaterals
13	Theoretical	Transformation geometry and geometric tiles
14	Theoretical	Activities for teaching several geometric concepts
15	Theoretical	Evaluating student work
16	Final Exam	Final exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	5	3	112
Midterm Examination	1	38	2	40
Final Examination	1	46	2	48
Total Workload (Hours)				200
[Total Workload (Hours) / 25*] = ECTS				8

*25 hour workload is accepted as 1 ECTS



Learning Outcomes

1	1. To introduce media to be used in teaching geometry
2	2. To use technology assisted materials to be used in teaching geometry
3	3. To design technology assisted materials to be used in teaching geometry.
4	4. To be able to construct the basic concepts of geometry in dynamic geometry environment.
5	5. To be able to write academically specific to the field.

Programme Outcomes (*Mathematics Education Master*)

1	Learns sufficient theoretical knowledge in the field of mathematics education
2	Uses theoretical knowledge in educational settings
3	Integrates mathematics education knowledge with the other disciplines and products functional knowledge
4	Uses information and communication technologies efficiently in conceptual learning
5	Finds scientific solutions to the problems in the field of mathematics education
6	Evaluates the knowledge critically in the field
7	Participates team projects in the mathematics education field
8	Shares national and international data in the field of mathematics education
9	Comprehends and evaluates science-technology-society and mathematics interactions
10	Comprehends mathematics under the ethical values and takes account of ethical considerations
11	Follows the current development in the mathematics education field
12	Develops strategical plans and evaluates them in the context of quality processes
13	Adopts lifelong learning strategies to his/her studies

Contribution of Learning Outcomes to Programme Outcomes 1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High

	L1	L2	L3	L4	L5
P1	4	4	4	4	4

