AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Mathematical Knowledge For Teaching								
Course Code	MTE517		Couse Level	Second Cycle (Master's Degree)					
ECTS Credit	8	Workload	200 *(Hours)*	Theory	3	Practice	0	Laboratory	0
Objectives of the Course	At the end of this course students will gain knowledge about mathematical knowledge for teaching and will be able to conduct research on this subject.								
Course Content	Development of mathematical knowledge for teaching, perspectives of mathematical knowledge for teaching, and literature review of mathematical knowledge for teaching.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Experiment, Discussion, Case Study, Project Based Study, 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	Altun, M. (2012). İlköğretim ikinci kademede (6,7 ve 8. Sınıflarda) Matematik Öğretimi. Bursa: Alfa Aktüel. (8. Baskı).
2	Baki, A. (2008). Kuramdan Uygulamaya Matematik Eğitimi. Ankara: Alfa Yayınları.
3	3. Baykul, Y. (2014). Ortaokulda Matematik Öğretimi (5-8 Sınıflar). (2. Baskı) Pegem Akademi, Ankara.

Week	Weekly Detailed Course Contents	
1	Theoretical	Introduction to mathematical knowledge for teaching
2	Theoretical	Pedagogical content knowledge and its models
3	Theoretical	Models of pedagogical content knowledge and their elements
4	Theoretical	Mathematical knowledge for teaching
5	Theoretical	Subject matter knowledge: Common Content Knowledge (CCK)
6	Theoretical	Subject matter knowledge: Knowledge at the mathematical horizon
7	Theoretical	Subject matter knowledge: Specialized content knowledge (SCK)
8	Intermediate Exam	Mid-term Exam
9	Theoretical	Pedagogical content knowledge: Knowledge of content and students (KCS)
10	Theoretical	Pedagogical content knowledge: Knowledge of content and teaching (KCT)
11	Theoretical	Pedagogical content knowledge: Knowledge of Curriculum
12	Theoretical	Teachers' beliefs and opinions
13	Theoretical	Technological pedagogical content knowledge
14	Theoretical	The role of teacher training in the development of mathematical knowledge for teaching
15	Theoretical	Examination of research related to mathematical knowledge for teaching
16	Final Exam	General assesment

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	To be able to identify pedagogical content knowledge and mathematical knowledge for teaching.
2	To be able to improve his/her understanding of mathematical knowledge for teaching.
3	To be able to identify technological pedagogical content knowledge.
4	To be able to comprehend the role and the importance of mathematical knowledge for teaching in the area of teacher education.
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	5	5	5	5	4
P2	5	5	5	5	
P3	5	5	5	5	
P4	4	4	5	4	
P5	5	5	5	5	
P6	5	5	5	5	
P7	5	5	5	5	
P8	5	5	5	5	
P9	4	4	5	4	
P10	5	5	5	5	
P11	5	5	5	5	
P12	5	5	5	5	
P13	4	4	4	4	