AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Teaching of Mathematical Skills								
Course Code	MTE511		Couse Level	Second Cycle (Master's Degree)					
ECTS Credit	8	Workload	200 *(Hours)*	Theory	3	Practice	0	Laboratory	0
Objectives of the Course	The aim of this course is to have an opinion about mathematical skills and design learning environments to develop mathematical skills								
Course Content	Mathematical knowledge and types of it, mathematical literacy, mathematical process skills: reasoning and proof, communication, connection (linking), mathematical skills: mathematical modeling and problem solving, dignification to mathematics and teaching of mathematics, using the information and communication technologies effectively, estimation, calculating from the mind, number sense, representation								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Demonstration, Discussion, 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. (2002). İlköğretim ikinci kademede (6, 7 ve 8. sınıflarda) matematik öğretimi. Alfa Basım Yayım Dağıtım, İstanbul
2	Baki, A. (2006). Kuramdan uygulamaya matematik eğitimi. Derya Kitabevi
3	Erbaş, A. K., Çetinkaya, B. (2016). Lise Matematik Konuları İçin Günlük Hayattan Modelleme Soruları. TÜBA, Ankara
4	Lesh, R. A., & Doerr, H. (2002). Beyond constructivism: A models and modelling perspective on teaching, learning, and problem solving in mathematics education, Routledge: NY
5	Van de Walle, J. A., Karp, K. S. & Bay-Williams, J. M. (2012). İlkokul ve Ortaokul Matematiği, (Çev.Ed. Soner Durmuş). Ankara: Nobel Yayıncılık

Week	Weekly Detailed Course Contents	
1	Theoretical	The concept of skill and teaching of mathematical skills
2	Theoretical	Mathematical knowledge and types of it
3	Theoretical	Mathematical literacy
4	Theoretical	Mathematical modeling and problem solving
5	Theoretical	Mathematical modeling and problem solving
6	Theoretical	Reasoning and proof
7	Theoretical	Communication
8	Intermediate Exam	Midterm
9	Theoretical	Connection (linking)
10	Theoretical	Dignification to mathematics and teaching of mathematics
11	Theoretical	Using the information and communication technologies effectively
12	Theoretical	Estimation
13	Theoretical	Calculating from the mind
14	Theoretical	Number sense
15	Theoretical	Representation
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	To gain knowledge about mathematical modelling
2	To learn how to developed mathematical skills
3	Evaluation of 21st century skills in the context of mathematical skills
4	To examine scientific researches on mathematical skills
5	To design a research on the development of mathematical skills

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	4	4	4
P2	5	5	4	4	4
P3	5	5	5	5	5
P4	5	5	3	3	3
P5			4	4	4
P6	5	5	4	4	4
P7			4	4	4
P8	5	5	3	3	3
P9	5	5	3	3	3
P10			4	4	4
P11	5	5	5	5	5
P12	4	4	4	4	4
P13	3	3	3	3	3