



## AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Theories in Mathematics Education							
Course Code		MTE509		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		In general, learning theories, in particular, to raise awareness of the theories of non-formal learning in mathematics education and to study the applications of the theories in the field							
Course Content		An overview of learning theory, need for such theory, the output process of emergence of theory, practice effects of the theory, the introduction of non-formal learning theory in mathematics education (behavioral, cognitive, socio-cultural constructivist theory and eclectic approaches), the basic principles, learning insights, distinctive features, students and teachers appraised roles, perception and evaluation of learning outcomes, development and changes provided for students							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Demonstration, Discussion, Individual Study					
Name of Lecturer(s)		Prof. Ersen YAZICI							

### Assessment Methods and Criteria

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

### Recommended or Required Reading

1	Baki, A. (2006). Kuramdan uygulamaya matematik eğitimi. Derya Kitabevi
2	Bingölbali, E., Arslan, S. & Zembat, İ. Ö. (2016). Matematik Eğitiminde Teoriler. Ankara: Pegem Akademi
3	Van de Walle, J. A., Karp, K. S. & Bay-Williams, J. M. (2012) İlkokul ve Ortaokul Matematiği (Çev.Edt: Durmuş, S.), Ankara: Nobel Yayıncılık

Week	Weekly Detailed Course Contents	
1	Theoretical	An overview of learning theories
2	Theoretical	An overview of learning theories
3	Theoretical	The need for theory, the emergence of theories
4	Theoretical	Effects of theories on implementation
5	Theoretical	Introduction of non-formal learning theories in mathematics education (behaviorist, cognitive, socio-cultural, constructivist theories and eclectic approaches)
6	Theoretical	Introduction of non-formal learning theories in mathematics education (behaviorist, cognitive, socio-cultural, constructivist theories and eclectic approaches)
7	Theoretical	Basic principles of theories and perspectives on learning
8	Intermediate Exam	Midterm
9	Theoretical	Distinguishing features of theories
10	Theoretical	Student and teacher-trained roles
11	Theoretical	Perception and evaluation of learning outcomes
12	Theoretical	Foreseen development and changes in the student
13	Theoretical	Practices on non-formal learning theories in mathematics education
14	Theoretical	Practices on non-formal learning theories in mathematics education
15	Theoretical	Practices on non-formal learning theories in mathematics education
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*] = <b>ECTS</b>				8
*25 hour workload is accepted as 1 ECTS				

### Learning Outcomes

1	To have knowledge about learning theories
2	The need for theory, the knowledge of the emergence of theories
3	To know the theories of non-formal learning in mathematics education
4	To know the basic principles, learning outlooks, distinguishing features
5	To know the roles of students and teachers
6	To know the developments and changes foreseen in the student

### 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	L6
P1	5	5	5	5	5	5
P2	4	4	4	4	4	4
P3	4	4	4	4	4	4
P4	3	3	3	3	3	3
P6	4	4	4	4	4	4
P9	4	4	4	4	4	4
P11	5	5	5	5	5	5
P12	3	3	3	3	3	3
P13	3	3	3	3	3	3

