AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Teaching Through Puzzles and Games in Mathematics Education								
Course Code	MTE514		Couse Level	Second Cycle (Master's Degree)					
ECTS Credit	8	Workload	200 *(Hours)*	Theory	3	Practice	0	Laboratory	0
Objectives of the Course	Evaluation of educational games according to general and special purposes of mathematics education, Analysing of contribution of educational games to teaching mathematical concepts								
Course Content	Description and history of educational games, Evaluation of educational games according to general and special purposes of mathematics education, Analyzing of contribution of educational games to teaching mathematical concepts and of strategies of using educational games efficiently in mathematics education. Using of puzzles in mathematics education. Types of puzzles (reasoning games, verbal games, geometric-mechanical games, memory games and strategy games). Introduction of Sudoku, Puzzle, Crossword, Qbitz, Qwirkle, Metaforms, Reversi, MasterMind, Mangala, Aballon and Tangram.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Discussion, Individual Study								
Name of Lecturer(s)									

Assessment Methods and Criteria		
Method	Quantity	Percentage (%)
Midterm Examination	1	30
Final Examination	1	70

Recommended or Required Reading	
1	MEB. (2013). Zeka Oyunları Dersi Öğretim Programı
2	Metin, O. (2015). Eğitimde Akıl Oyunları Sistemi. İzmir: Mum Yayınları

Week	Weekly Detailed Course Contents	
1	Theoretical	Description and history of educational games
2	Theoretical	Evaluation of educational games according to general and special purposes of mathematics education
3	Theoretical	Analyzing of contribution of educational games to teaching mathematical concepts and of strategies of using educational games efficiently in mathematics education
4	Theoretical	Analyzing of contribution of educational games to teaching mathematical concepts and of strategies of using educational games efficiently in mathematics education
5	Theoretical	Using of puzzles in mathematics education
6	Theoretical	Types of puzzles (Reasoning games: Sudoku, square scribble, Kendoku, Kakuro etc)
7	Theoretical	Types of puzzles (Verbal games: Anagrams, Scrabble, Word hunting, code games etc)
8	Intermediate Exam	Midterm
9	Theoretical	Types of puzzles (Geometric-Mechanical games: Tangram, knots, Jenga etc)
10	Theoretical	Types of puzzles (Memory games: finding twins, navigation games etc)
11	Theoretical	Types of puzzles (Strategy games: Go, Qbitz, Metaforms, Reversi , Qwirkle, Master Mind, Mangala, Aballon etc)
12	Theoretical	Analyzing of contribution of educational games to evaulating creativity and critical thinking in point of cognitive theories
13	Theoretical	Evaulating mathematical contents with educational games and using in math education
14	Theoretical	Micro-teaching applications
15	Theoretical	Micro-teaching applications
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	Knowing the description and the history of educational games
2	Evaluation of educational games according to general and special purposes of mathematics education
3	Analyzing of contribution of educational games to teaching mathematical concepts and of strategies of using educational games efficiently in mathematics education
4	Understanding the importance of puzzles in mathematics education
5	Developing educational activities with educational games

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