

# PROBLEM SOLVING IN MATHEMATICS

<b>1</b>	Course Title:	PROBLEM SOLVING IN MATHEMATICS	
<b>2</b>	Course Code:	İMÖ4001	
<b>3</b>	Type of Course:	Compulsory	
<b>4</b>	Level of Course:	First Cycle	
<b>5</b>	Year of Study:	2	
<b>6</b>	Semester:	3	
<b>7</b>	ECTS Credits Allocated:	3.00	
<b>8</b>	Theoretical (hour/week):	2.00	
<b>9</b>	Practice (hour/week):	0.00	
<b>10</b>	Laboratory (hour/week):	0	
<b>11</b>	Prerequisites:	Yok	
<b>12</b>	Language:	Turkish	
<b>13</b>	Mode of Delivery:	Face to face	
<b>14</b>	Course Coordinator:	Doç. Dr. YELİZ YAZGAN	
<b>15</b>	Course Lecturers:		
<b>16</b>	Contact information of the Course Coordinator:	İş Tel 0224.2755024 e-mail: yazgany@uludag.edu.tr	
<b>17</b>	Website:		
<b>18</b>	Objective of the Course:	The aim of this course is to discuss the place of problem solving in mathematics education and the methods of providing students with problem solving skills.	
<b>19</b>	Contribution of the Course to Professional Development:	The perspectives of the students taking the course about problem solving will expand and therefore they will understand the importance of its teaching.	
<b>20</b>	Learning Outcomes:		
		<b>1</b>	Understanding what is problem and problem solving
		<b>2</b>	Appreciating the importance of problem solving
		<b>3</b>	Knowing the types of problems
		<b>4</b>	Understanding the stages of problem solving
		<b>5</b>	Having knowledge about routine problem solving and teaching
		<b>6</b>	Having knowledge about non-routine problem solving and teaching
		<b>7</b>	Understanding problem posing and its importance
		<b>8</b>	Using problem posing strategies
		<b>9</b>	
		<b>10</b>	
<b>21</b>	Course Content:		
		<b>Course Content:</b>	
Week	Theoretical	Practice	
<b>1</b>	What is problem and problem solving?		
<b>2</b>	Importance and goals of teaching problem solving		
<b>3</b>	Classifications of problems		
<b>4</b>	Stages of problem solving		

5	Routine problem solving (Identifying given and unknown, drawing shapes, estimating)	
6	Routine problem solving (Separating the problem into parts, evaluating the solution)	
7	Routine problem solving (Easy solutions for problems known as difficult)	
8	Routine problem solving (Easy solutions for problems known as difficult)	
9	Non-routine problem solving (Making a systematic list, quessing and checking)	
10	Non-routine problem solving (Making a drawing, looking for a pattern)	
11	Non-routine problem solving (Simplifying the problem, writing an open sentence, estimating)	
12	Non-routine problem solving (making a table, reasoning)	
13	Problem posing (definition, importance)	
14	Problem posing (strategies)	
22	Textbooks, References and/or Other Materials:	
23	Assesment	
<b>TERM LEARNING ACTIVITIES</b>		<b>NUMBER</b>
		<b>WEIGHT</b>
Midterm Exam	1	40.00
Quiz	0	0.00
Home work-project	0	0.00
Final Exam	1	60.00
Total	2	100.00
Contribution of Term (Year) Learning Activities to Success Grade		40.00
Contribution of Final Exam to Success Grade		60.00
Total		100.00
Measurement and Evaluation Techniques Used in the Course		Written examination
<b>24</b>	<b>ECTS / WORK LOAD TABLE</b>	

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	2.00	28.00
Practicals/Labs	0	0.00	0.00
Self study and preperation	0	0.00	0.00
Homeworks	0	0.00	0.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	30.00	30.00
Others	0	0.00	0.00
Final Exams	1	35.00	35.00
Total Work Load			93.00
Total work load/ 30 hr			3.10
ECTS Credit of the Course			3.00

25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS															
	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	PQ11	PQ12	PQ13	PQ14	PQ15	PQ16
ÖK1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ÖK2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ÖK3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ÖK4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ÖK5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ÖK6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ÖK7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ÖK8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
<b>LO: Learning Objectives    PQ: Program Qualifications</b>																
<b>Contribution Level:</b>	<b>1 very low</b>		<b>2 low</b>			<b>3 Medium</b>			<b>4 High</b>			<b>5 Very High</b>				