



**AYDIN ADNAN MENDERES UNIVERSITY
GRADUATE SCHOOL OF SOCIAL SCIENCES
MANAGEMENT INFORMATION SYSTEMS
MANAGEMENT INFORMATION SYSTEMS
MANAGEMENT INFORMATION SYSTEMS MASTER
COURSE INFORMATION FORM**

Course Title	Artificial Intelligence and Applications								
Course Code	MIS510	Course Level			Second Cycle (Master's Degree)				
ECTS Credit	7	Workload	181 (Hours)	Theory	3	Practice	0	Laboratory	0
Objectives of the Course	The aim of this course, students are informed to provide engineering applications of artificial intelligence and related matters.								
Course Content	Artificial intelligence, expert systems, fuzzy logic, artificial neural networks, Neuro-Fuzzy, Genetic Algorithm								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Demonstration, Discussion								
Name of Lecturer(s)									

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

Recommended or Required Reading

1	P.H. Winston, "Artificial Intelligence".
2	K. Parsaye, M. Chignell, "Expert Systems for Experts".
3	T.J. Ross, "Fuzzy Logic With Engineering Applications".
4	L.H. Tsoukalas, R.E. Uhrig, "Fuzzy and Neural Approaches in Engineering".
5	S. Haykin, "Neural Networks".

Week Weekly Detailed Course Contents

Week	Weekly Detailed Course Contents
1	Theoretical The basic principles of artificial intelligence
2	Theoretical Expert systems, Knowledge Engineering, Expert system's general structure
3	Theoretical Methods of presentation of information, search methods, Inference
4	Theoretical Expert System Design, Forward chaining, Backward chaining
5	Theoretical Probability and expert systems
6	Theoretical Fuzzy sets, fuzzy sets properties, Fuzzy set operations
7	Theoretical Fuzzy relations, membership functions, hypnotise
8	Theoretical Inference techniques, rinsing techniques
9	Intermediate Exam Midterm Exam
10	Intermediate Exam Midterm Exam
11	Theoretical Artificial Neural Networks
12	Theoretical Artificial Neural Network
13	Theoretical Applications of Neural Networks
14	Theoretical Neuro-Fuzzy
15	Final Exam Final Exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	16	0	3	48
Assignment	1	0	20	20
Individual Work	26	0	3	78
Quiz	2	0	5	10
Midterm Examination	1	0	10	10



Final Examination	1	0	15	15
			Total Workload (Hours)	181
			[Total Workload (Hours) / 25*] = ECTS	7
*25 hour workload is accepted as 1 ECTS				

Learning Outcomes

1	Ability to understand the logic of fuzzy
2	Ability to understand the logic of genetic algorithm
3	The ability to design Intelligent System
4	The ability to design an intelligent system using techniques such as neural networks and expert system
5	The ability to understand issues related to Artificial Intelligent

Programme Outcomes (Management Information Systems Master)

1	Be aware of the different types of information technologies and systems using in business, have enough knowledge to design a suitable system
2	Analyse the needs for an information systems and have control over the processes at the analysis, design and implementation stages of the database that belongs to the system
3	Convey information about current trends and their own studies both verbally and visually ways.
4	Be able to follow current developments in modern business techniques and technologies, especially information technologies
5	Understand the interaction between his department and other relational departments, if necessary make a team, take responsibility and do the works with team.
6	Know the information technologies and systems using in different types of business, if necessary take the system responsibility.
7	Be aware of the social transformation especially in their own field and social, legal and moral responsibilities belongs to other work field.
8	Develop their knowledge to the level of expertise which they learn them in license level.
9	Carry out a work which requires an expertness in their field.
10	Construct and perform an academic work.

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		4	4	4	4
P2	4	4	5	4	5
P3		4	5	4	5
P4	4	4	5	4	5
P5	4	4	5	4	5
P6	4	4	5	4	5
P7	4	4	5	4	5
P8	4	4	5	4	5
P9	4		5	4	5
P10	4	4	4	4	5

