T.C.

ESKİŞEHİR OSMANGAZİ ÜNİVERSİTY

FACULTY OF SCIENCES

MATHEMATICS AND COMPUTER SCIENCES DEPARTMENT

COURSE INFORMATION FORM

Course Name	Course Code
Artificial Intelligence	

Semester	Number of Course Hours per Week		Credit	ECTS
	Theory	Practice		
4	3	0		5

Course Category (Credit)				
Basic Sciences	Engineering Sciences	Design	General Education	Social
	X			

Course Language	Course Level	Course Type
Turkish	Undergraduate	Compulsory

Prerequisite(s) if any	None
Objectives of the Course	• Introducing students to the basic concepts and techniques of Artificial Intelligence. • Learning AI by doing it, i.e. developing skills of using AI algorithms for solving practical problems • To gain experience of doing independent study and research.
Short Course Content	Presentation of artificial intelligence as a coherent body of ideas and methods to acquaint the student with the classic programs in the field and their underlying theory

	Learning Outcomes of the Course	Contributed PO(s)	Teaching Methods *	Measuring Methods **
1	Understanding the Fundamental Techniques and Concepts of Artificial Intelligence	1, 2	1, 4, 2005	A
2	Developing the Ability to Solve Various Problems Using Artificial Intelligence Techniques	3, 4	6, 10	A
3	Gaining Experience in Individual Work and Research Topics	5, 6	11, 12	A
4	Acquiring Knowledge and Application Skills by Using Classical Programs Related to Theories and Applications	1, 2, 3, 4	1, 6, 2007	A

Main Textbook	Stuart Russell, Peter Norvig. Artificial Intelligence: A Modern Approach, Second Edition, Prentice Hall. 2003
Supporting References	Ivan Bratko, Prolog Programming for Artificial Intelligence, 3/E, Addison-Wesley, 2001
Necessary Course Material	None

***Teaching Methods 1:**Expression, **2:**Discussion, **3:**Experiment, **4:**Simulation, **5:**Question-Answer, **6:**Tutorial, **7:**Observation, **8:**Case Study, **9:**Technical Visit, **10:**Trouble/Problem Solving, **11:**Induvidual Work, **12:**Team/Group Work, **13:**Brain Storm, **14:**Project Design / Management, **15:**Report Preparation and/or Presentation

****Measuring Methods A:**Exam, **B:**Quiz, **C:**Oral Exam, **D:**Homework, **E:**Report, **F:**Article Examination, **G:**Presentation, **I:**Experimental Skill, **J:**Project Observation, **K:**Class Attendance; **L:**Jury Exam

Course Schedule	
1	Introduction to AI Course Organization / Introduction to Search
2	Problem formulation and search
3	Heuristic search
4	Production system
5	Semantic network and frame
6	Propositional logic
7	Propositional logic
8	Midterm Exam
9	Other methods for reasoning
10	Applications
11	An introduction to pattern recognition
12	Multilayer neural network
13	Self-organizing neural network
14	Self-organizing neural network
15	Final Exam
16	Final Exam

Calculation of Course Workload			
Activities	**Number**	**Time (Hour)**	**Total Workload (Hour)**
Course Time (number of course hours per week)	14	3	42
Classroom Studying Time (review, reinforcing, prestudy,….)	14	3	42
Homework			
Quiz Exam			
Studying for Quiz Exam			
Oral exam			
Studying for Oral Exam			
Report (Preparation and presentation time included)			
Project (Preparation and presentation time included)			
Presentation (Preparation time included)			
Mid-Term Exam	1	2	2
Studying for Mid-Term Exam	1	20	20
Final Exam	1	2	2
Studying for Final Exam	1	30	30
Total workload			**138**
Total workload / 30			**4,6**
Course ECTS Credit			**5**

*Teaching Methods 1:Expression, 2:Discussion, 3:Experiment, 4:Simulation, 5:Question-Answer, 6:Tutorial, 7:Observation, 8:Case Study, 9:Technical Visit, 10:Trouble/Problem Solving, 11:Induvidual Work, 12:Team/Group Work, 13:Brain Storm, 14:Project Design / Management, 15:Report Preparation and/or Presentation

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Evaluation	
Activity Type	**%**
Mid-term	50
Quiz	
Homework	
Bir öğe seçin.	
Bir öğe seçin.	
Final Exam	50
Total	100

RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO) (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low)		
NO	**PROGRAM OUTCOME**	**Contribution**
1	The ability to apply knowledge of Mathematics and Computer Sciences.	2
2	To have sufficient theoretical and practical knowledge of Mathematics at an international level.	3
3	The ability to describe, model, and solve mathematical problems in Mathematics and related subjects.	2
4	The skill to solve and design a problem process in accordance with a defined target.	2
5	Skills to analyze data, interpret and apply it to other data, and use these data on a computer.	3
6	The skill to use modern techniques and computational tools needed for mathematical applications.	3
7	The skill to work effectively in both discipline-specific and interdisciplinary teams.	3
8	The ability to improve oneself by following developments in modern, scientific, and technological subjects, including Mathematics and Computer Sciences.	2
9	The skill to communicate orally and in writing in a clear and concise manner, with the ability to work independently and make analytical decisions.	3
10	The skill to have professional and ethical responsibility.	2
11	The skill to have awareness of quality issues and scientific research.	2
12	The skill to be sensitive to environmental issues related to problems and development of living areas, and to be consistent in social relations.	2
13	The ability to solve problems in working life by finding appropriate algorithms through mathematical modeling and writing computer programs.	2
14	The skill to develop and design software systems at different levels of complexity.	2
15	The recognition of the necessity of lifelong learning and the ability to apply lifelong learning principles.	3

LECTUTER(S)				
Prepared by	Doç. Dr. Özer Çelik			
Signature(s)				

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