T.C.

ESKİŞEHİR OSMANGAZİ UNİVERSİTY

FACULTY OF SCIENCES

MATHEMATİCS AND COMPUTER SCIENCES DEPARTMENT

COURSE INFORMATION FORM

Course Name	Course Code
Fuzzy Logic	821618005

Semester	Number of Course Hours per Week		Credit	ECTS
	Theory	Practice		
8	3	0	-	5

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

Course Language	Course Level	Course Type
Turkish	Undergraduate	Elective

Prerequisite(s) if any	
Objectives of the Course	The main of the course is to give the basic concepts and techniques in the course content and to improve students' problem solving skills by applying these concepts and techniques.
Short Course Content	Fuzzy logic, Fuzzy set, Operations on fuzzy sets, Triangular norms, Some fuzzy algebraic structures, Some fuzzy geometric structures.

	Learning Outcomes of the Course	Contributed PO(s)	Teaching Methods *	Measuring Methods **
1	Have sufficient knowledge in Complex Analysis subjects.	1,2	1,2	A
2	Learn the similarities and differences between Real Analysis and Complex Analysis	1,2	1,2	A
3	Develops ability to analyze and solve problems encountered	3,4,5,9	2,10	A
4	Analytical thinking skills develop and the ability to make individual and independent decisions develops.	3,4,5,9	10,11	A
5	The ability to analyze and interpret data, apply interpretation to other data, and apply this information in a computer environment develops.	13	10,11	A
6				
7				
8				

***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

Main Textbook	Klement E. Peter, Mesiar Radko ve Pap Endre, 2000, Triangular norms
Supporting References	1-Kuijken, L., Maldeghem, H. V. and Kerre, 1999, E., Fuzzy Projective Geometries From Fuzzy Vector Spaces, Information Processing and Management of Uncertainty in Knowledge-based Systems, 16, 95-108. 2- Zadeh, L.A., 1965, Fuzzy Sets, 8, 338-353.
Necessary Course Material	

Course Schedule	
1	Fuzzy logic, Fuzzy sets
2	Operations on fuzzy sets
3	t-norms
4	t-conorms
5	Cardinality, support and height in fuzzy sets
6	Fuzzy vector spaces
7	Problem solving
8	Mid term exam
9	Base and dimension in Fuzzy vector spaces
10	Introduction fuzzy geometry
11	Models of fuzzy geometry
12	Fuzzy projective planes
13	Fuzzy projective spaces
14	Fiber Sets
15	Problem solving
16,17	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	5	3	15
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	
		Total workload / 30	
		Course ECTS Credit	**5**

Evaluation	
Activity Type	**%**
Mid-term	40
Quiz	
Homework	10
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 knowledges of Mathematics and Computer Sciences,	4
2	To have sufficient theoretical and practical knowledge of Mathematics at international level,	5
3	The ability of describing, modelling and solving of mathematical problems at Mathematics and related subjects,	5
4	The skill to solve and design a problem process in accordance with a defined target,	5
5	Skills to analyze data, interpret and apply to other datum and using these data on computer,	4
6	The skill to use the modern techniques and computational tools needed for mathematical applications,	3
7	The skill to make team work within the discipline and interdisciplinary,	2
8	The ability to improve oneself by following the developments on other modern, scientific and technological subjects as well as Mathematics and Computer Sciences,	2
9	The skill to communicate orally and in written way, in a clear and concise manner by having individual work skills and ability to independently decide and analytical thinking,	4
10	The skill to have professional and ethical responsibility,	2
11	The skill to have consciousness for quality issues and scientific research,	2
12	The skill to be sensitive to environmental issues related with problems and development of living area and consistent in the social relations,	1
13	Ability to solve problems in the working life faced to find an appropriate algoritms via mathematical modeling and to write computer programs,	4
14	The skill to developed design of software systems at different complex levels,	1
15	The credence of necessity of life-long learning and ability to apply the formation long-life learning.	1

LECTUTER(S)				
Prepared by	Prof. Dr. Ziya AKÇA			
Signature(s)				

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