



ESOGÜ Mathematics and Computer Sciences COURSE INFORMATION FORM

SEMESTER	Fall
-----------------	------

COURSE CODE	821617010	COURSE NAME	Data Mining
--------------------	-----------	--------------------	-------------

SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
7	3	0	0	3	5	COMPULSORY () ELECTIVE (x)	Turkish

COURSE CATAGORY

Mathematics	Computer		Social Science
	X		

ASSESSMENT CRITERIA

	Evaluation Type	Quantity	%
MID-TERM	1st Mid-Term	1	50
	2nd Mid-Term		
	Quiz		
	Homework		
	Project		
	Report		
	Others (.....)		
FINAL EXAM		1	50
PREREQUIEITE(S)	None.		
COURSE DESCRIPTION	Data Mining		
COURSE OBJECTIVES	This course introduces basic concepts, tasks, methods, and techniques in data mining. The emphasis is on various data mining problems and their solutions.		
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION	Preparing students for more advanced works in Computer Science.		
COURSE OUTCOMES	Students will develop an understanding of the data mining process and issues, learn various techniques for data mining, and apply the techniques in solving data mining problems using data mining tools and systems. Students will also be exposed to a sample of data mining applications.		
TEXTBOOK	W Han, J. and Kamber, M., Data Mining: Concepts and Techniques, 2nd Edition, Morgan Kaufmann, 2006 .		
OTHER REFERENCES	P. Tan, M. Steinbach and V. Kumar, Introduction to Data Mining, Addison Wesley, 2006.		
TOOLS AND EQUIPMENTS REQUIRED	None.		

COURSE SYLLABUS

WEEK	TOPICS
1	Introduction
2	Data preprocessing
3	Classification
4	Decision trees
5	Midterm Exam
6	Bayesian
7	Backpropagation
8	Rule-based classification
9	kNN
10	YSA
11	Clustering
12	Hierarchical clustering
13	Density-based methods
14	Cluster evaluation, Association rule mining
15,16	Final Exam

NO	PROGRAM OUTCOMES	3	2	1
1	The ability to apply knowledges of Mathematics and Computer Sciences,		x	
2	To have sufficient theoretical and practical knowledge of Mathematics at international level,	x		
3	The ability of describing, modelling and solving of mathematical problems at Mathematics and related subjects,		x	
4	The skill to solve and design a problem process in accordance with a defined target,		x	
5	Skills to analyze data, interpret and apply to other datum and using these data on computer,	x		
6	The skill to use the modern techniques and computational tools needed for mathematical applications,	x		
7	The skill to make team work within the discipline and interdisciplinary,	x		
8	The ability to improve oneself by following the developments on other modern, scientific and technological subjects as well as Mathematics and Computer Sciences,		x	
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,	x		
10	The skill to have professional and ethical responsibility,		x	
11	The skill to have consciousness for quality issues and scientific research,		x	
12	The skill to be sensitive to environmental issues related with problems and development of living area and consistent in the social relations,		x	
13	Ability to solve problems in the working life faced to find an appropriate algorithms via mathematical modeling and to write computer programs,		x	
14	The skill to developed design of software systems at different complex levels,		x	
15	The credence of necessity of life-long learning and ability to apply the formation long-life learning.	x		

1:None. 2:Partially contribution. 3: Completely contribution.

Instructor(s): Dr. Özer ÇELİK

Signature:

Date: