



AYDIN ADNAN MENDERES UNIVERSITY
GRADUATE SCHOOL OF HEALTH SCIENCES
BIOSTATISTICS
BIOSTATISTICS (MEDICAL)
BIOSTATISTICS (MEDICAL) MASTER
COURSE INFORMATION FORM

Course Title	Introduction to Data Mining								
Course Code	BİS532		Course Level		Second Cycle (Master's Degree)				
ECTS Credit	4	Workload	106 (Hours)	Theory	2	Practice	0	Laboratory	0
Objectives of the Course	To develop an understanding of the strengths and limitations of popular data mining techniques and to be able to identify promising statistical applications of data mining.								
Course Content	The concepts, algorithms, techniques, data preprocessing, design and implementation of data warehouse.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Case Study, Project Based Study								
Name of Lecturer(s)									

Assessment Methods and Criteria

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

Recommended or Required Reading

1	Han, J., Pei, J., & Kamber, M. (2011). Data mining: concepts and techniques. Elsevier.
2	Gorunescu, F. (2011). Data Mining: Concepts, models and techniques (Vol. 12). Springer Science & Business Media.
3	Kantardzic, M. (2011). Data mining: concepts, models, methods, and algorithms. John Wiley & Sons.
4	Tan, P. N. (2018). Introduction to data mining. Pearson Education India.

Week	Weekly Detailed Course Contents	
1	Theoretical	Definition and application areas of data mining
2	Theoretical	Overview of data mining techniques and models
3	Theoretical	Basic requirements and components of data mining
4	Theoretical	Data mining stages
5	Theoretical	Data extraction and pre-processing techniques-I
6	Theoretical	Data extraction and pre-processing techniques-II
7	Theoretical	Data reduction methods-I
8	Intermediate Exam	Midterm exam
9	Theoretical	Veri azaltma yöntemleri-II
10	Theoretical	Data transformation techniques
11	Theoretical	Feature selection methods
12	Theoretical	Classification models
13	Theoretical	Regression models
14	Theoretical	Models for clustering
15	Theoretical	Literature review and discussion
16	Final Exam	Final exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28
Lecture - Practice	14	0	2	28
Quiz	1	20	2	22
Midterm Examination	1	10	1	11



Final Examination	1	15	2	17
Total Workload (Hours)				106
[Total Workload (Hours) / 25*] = ECTS				4
*25 hour workload is accepted as 1 ECTS				

Learning Outcomes

1	To develop an understanding of the concepts in data mining
2	To be able to locate and evaluate popular data mining techniques and software packages
3	To be able to identify promising applications of data mining
4	To be able to implement prototype data mining systems
5	To be able to design/implement new data mining algorithms

Programme Outcomes (*Biostatistics (Medical) Master*)

1	To be able to understand the interdisciplinary interaction related with biostatistics.
2	to be able to use Theoretical and practical knowledge at the level of expertise.
3	To be able to interpret the information by integrating information from different disciplines and create new information
4	To be able to analyze the problems encountered by using research methods
5	to be able to conduct a study as an independent specialist
6	To be able to formulate solutions for complex unpredictable problems encountered by developing new approaches and taking responsibility.
7	To be able to resolve problems in environments that require leadership.
8	To be able to evaluate and direct knowledge and skills with a critical approach at the level of expertise.
9	To be able to give statistical advise at the beginning stages of preparing health related projects
10	To be able to get the knowledge and the ability of using statistical packages

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	2	3	3	4	3
P2	3	3	4	4	4
P3	2	3	4	4	5
P4	3	4	3	4	4
P5	3	4	4	4	5
P6	3	3	3	3	4
P7	3	4	4	4	4
P8	3	4	4	4	4
P9	3	4	3	4	4
P10	3	5	4	3	4

