OSTİM TEKNİK ÜNİVERSİTESİ
A N K A R A

OSTIM TECHNICAL UNIVERSITY
FACULTY OF ENGINEERING
SOFTWARE ENGINEERING
UNDERGRADUATE COURSE

COURSE SYLLABUS FORM
2021-2022 SPRING

YZL 302 Data Mining

Course Name	Course Code	Term	Hour	Practice	Lab	Credit	Credit
Data Mining	YZL 302	6	3	0	0	3	4

Language of the Course	English
Type of Course	Mandatory
Course Level	Undergraduate
Method of Teaching	Face-to-face
Course Learning and Teaching Techniques	Lecture, Q/A, Homework

Purpose of the Course

The aim of this course is to recognize and understand the fundamentals of data mining, data information and knowledge, knowledge discovery in databases, traditional statistical methods, artificial neural networks, decision trees, Bayes' theorem, association rules, data warehouses, commercial applications and advanced techniques.

Learning Outcomes

Students who successfully complete this course;

- Have knowledge about the concept of data mining.
- Learn data mining models and techniques.
- Apply descriptive statistical techniques and software.
- Learn prediction models.
- Learn classification analysis.
- Learn association rule analysis.
- Have knowledge about web mining.

Course Content

This course covers widely used data mining methods and their applications. It focuses on data, information and knowledge, knowledge discovery in databases, traditional statistical methods, neural networks, decision trees, Bayes' theorem, association rules, data warehouses, commercial applications and advanced techniques.

Weekly Plan and Related Preparation Studies

Week	Subjects
1	Data mining concepts
2	Data mining models and techniques
3	Data Warehouse and OLAP - 1
4	Data Warehouse and OLAP - 2
5	Descriptive statistical analyzes
6	Decision Trees
7	Prediction Models
8	Midterm Exam
9	Clustering Analysis
10	Link Discovery Analytics -1
11	Link Discovery Analytics -2
12	Web mining
13	Project Presentation
14	Project Presentation
15	Project Presentation
16	Final Exam

Resources (Textbook and supplementary book)

1. Data Mining Concepts and Techniques, Jiawei HAN- Micheline KAMBER, Morgan Kaufman Pub.,2001

Evaluation System

Studies	Number	Contribution
Attendance		
Lab		
Application		
Field Study		
Course Specific Internship (if applicable)		
Quizzes/Studio/Critical		
Homework		
Presentation		
Projects		
Report		
Seminar		
Midterm Exams/Midterm Jury	1	40%
General Exam/Final Jury	1	60%
Total		**100%**
Contribution of Mid-Semester Studies to Success Grade		50%
Contribution of End of Semester Studies to Success Grade		50%
Total		**100%**

Course Category

Basic Vocational Courses	
Specialization/Field Courses	x
Support Lessons	
Communication and Management Skills Lessons	
Transferable Skills Lessons	

Course Learning Outcomes and Program Qualifications

No	Program Qualifications / Outcomes	Contribution Level				
		1	2	3	4	5
1	Ability to apply mathematics, science and engineering				x	
2	Ability to design and conduct experiments and to analyze and interpret experimental results.					
3	Ability to design a system, component, and process and according to specified requirements.				x	
4	Ability to work in an interdisciplinary team.				x	
5	Ability to identify, formulate and apply engineering problems.					x
6	Identifies, defines, formulates, solves complex Software Engineering problems and chooses and applies analysis and modelling methods suitable for this purpose.				x	
7	Develops, selects, uses modern techniques and tools necessary for the analysis and solution of complex problems encountered in Software Engineering applications and uses information technologies effectively.				x	

ECTS/Workload Table

Activities	Count	Duration (Hour)	Total Workload
Lesson hours (Including the exam week: 16 x total lesson hours)	16	3	48
Lab			
Application			
Course Specific Internship			
Field Study			
Out of Class Study Time			
Presentation/Seminar Preparation			
Projects			
Reports			
Homework			
Quizzes/Studio Critic			
Preparation Time for Midterm Exams/Midterm Jury	1	30	30
Preparation Time for the General Exam/General Jury	1	42	42
Total Workload	**(ECTS 120/30 = 4)**		**120**