Course Description	
Course Code	YS 429
Course Name	INTRODUCTION TO MACHINE LEARNING
Prerequisite Courses	
Language of the Course	The English
Course Coordinator	
Instructor(s)	
Course Assistants	
The aim of the course	Introduction to the machine learning subjects and algorithms
Course Content	Introduction to the machine learning subjects and algorithms

Weekly Course Content	
Week 1	Introduction
Week 2	Concept learning
Week 3	Decision tree learning
Week 4	Artificial neural networks
Week 5	Hypothesis evaluation
Week 6	Bayes learning
Week 7	Bayes learning
Week 8	Midterm exam.
Week 9	Computational learning theory
Week 10	Rule-based learning
Week 11	Analytical learning
Week12	Analytical learning
Week 13	Reinforcement learning
Week 14	Machine learning applications
Week 15	Final exam.

Course Learning Outcomes	
1	The ability to use machine learning methods and algorithms.
2	The ability to develop machine learning algorithms.
3	The ability to use decision trees
4	The ability to use supervised learning techniques
5	The ability to use unsupervised learning techniques
6	The ability to use artificial learning techniques

Contribution of the Course to Program Qualifications		Contribution Level
01	The student will have the ability to apply an analytical approach, mathematics and science knowledge in software and engineering issues.	1
02	The student will have the ability to identify, define, formulate and solve a problem in software and computer systems.	5
03	The student will have gains scientific research skills in software and engineering problems has the ability to design a system, part or process.	4
04	The student will have the ability to use the design capability, techniques and tools required for engineering applications.	2
05	The student will have the ability to design, implement and interpret experimental work and software projects by analyzing the results.	2
06	The student will have the ability to work between disciplines and teamwork.	2
07	The student will have the ability to work in international environments and adapt to different cultures.	1
08	The student will have verbal and written communication skills in Turkish and English.	4
09	The student will have the awareness of the necessity of lifelong learning and the ability to realize it.	3
10	The student will gain knowledge of legal issues with the awareness of professional and ethical responsibility.	3
11	The student will have managerial skills (leadership, organization, time and risk management, quality awareness, efficiency, etc.).	4
12	The student will have the ability to participate in social activities, to acquire regular sports habits and to use time in the best way.	3
13	The student will have the ability to find unusual ways and produce projects.	3
14	The student will have professional self-confidence, being an entrepreneur and taking initiative.	4
15	It is sensitive about the problems of the age and looks after the national interests.	4

ECTS WORKLOAD			
	Number	**Duration (hours)**	**Number*Duration**
Face to face education	14	2	28
Out-of-class study time (pre-study, reinforcement)	14	1	14
Homeworks	0	0	0
Presentation / Seminar preparation	0	0	0
Quizzes	0	0	0
Preparation for midterm exams	1	7	7
midterm exams	1	2	2
Project (Semester assignment)	1	10	10
Lab	0	0	0
field work	0	0	0
Preparation for the final exam	1	15	15
Semester final exam	1	2	2
Research	0	0	0
TOTAL WORKLOAD			**78**
ECTS			**3**

Evaluation		
SEMESTER EVALUATION	**Number**	**Contribution Percentage**
Midterm	1	40
Quiz	0	0
Homework	0	0
SEMESTER TOTAL		**40**
Contribution rate of mid-term evaluations to success		40
Contribution rate of the final exam to success		60
GRAND TOTAL		**100**

RESOURCES	
Textbook	Machine Learning, Tom Mitchell, McGraw Hill
Helpful Resources	