Course Description	
Course Code	YS 437
Course Name	THE INTERNET OF THINGS
Prerequisite Courses	
Language of the Course	The English
Course Coordinator	
Instructor(s)	
Course Assistants	
The aim of the course	
Course Content	

Weekly Course Content	
Week 1	Internet of Things (IoT) concept, IoT vision in terms of object, internet and meaning. The acceleration in the acceleration of the development of technology and the shortened periods in the transformation.
Week 2	Big data ocean. Data types and analysis concept. Search engine, online data, social media, economic, meteorological, power grid network.
Week 3	Data mining methods and internet of things applications
Week 4	IoT layers. Advances in hardware technology and infrastructure of IoT applications. Embedded system, sensors, actuator, controllers, ICs and new standards.
Week 5	Hardware technologies, communication standards
Week 6	Hardware technologies, communication standards
Week 7	Midterm exam.
Week 8	Time series, analysis and methods
Week 9	Time series, analysis and methods
Week 10	New technologies and methods in software and hardware
Week 11	cloud concept
Week12	Cloud and big data analytics applications
Week 13	Industry 4.0 concept and internet of things applications
Week 14	Industry 4.0 concept and internet of things applications
Week 15	Final exam.

Course Learning Outcomes	
1	Internet of Things (IoT) concept.
2	Streaming data and online analysis.
3	Big data concepts and applications.
4	Statistical analysis methods.
5	Data mining analysis.

Contribution of the Course to Program Qualifications		Contribution Level
01	The student will have the ability to apply analytical approach, mathematics and science knowledge in software and engineering issues.	5
02	The student will have the ability to identify, define, formulate and solve a problem in software and computer systems.	3
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.	3
05	The student will have the ability to design, implement and interpret experimental work and software projects by analyzing the results.	5
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.	0
08	The student will have verbal and written communication skills in Turkish and English.	3
09	The student will have the awareness of the necessity of lifelong learning and the ability to realize it.	0
10	The student will gain knowledge of legal issues with the awareness of professional and ethical responsibility.	2
11	The student will have managerial skills (leadership, organization, time and risk management, quality awareness, efficiency, etc.).	0
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.	5
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.	0

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	4	4	16
Presentation / Seminar preparation	1	5	5
Quizzes	0	0	0
Preparation for midterm exams	1	4	4
midterm exams	1	2	2
Project (Semester assignment)	0	0	0
Lab	0	0	0
field work	0	0	0
Preparation for the final exam	1	6	6
Semester final exam	1	2	2
Research	1	6	6
TOTAL WORKLOAD			**97**
ECTS			**3**

Evaluation		
SEMESTER EVALUATION	**Number**	**Contribution Percentage**
Midterm	1	20
Quiz	0	0
Homework	4	20
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	Slides and academic papers.
Helpful Resources	Big Data and The Internet of Things: Enterprise Information Architecture for A New Age, Robert Stackowiak (Author), Art Licht (Author), Venu Mantha (Author), Louis Nagode (Author)