Course Description

Course Code	YZ 301
Course Name	DATA COMMUNICATION NETWORKS
Prerequisite Courses	
Language of the Course	The English
Course Coordinator	
Instructor(s)	
Course Assistants	
The aim of the course	Detailed description and related performance issues of ISO-OSI layers and router and switch configuration
Course Content	Application layer, Transport layer, Network layer, Data Link Layer, Physical layer, Router and switch configuration

Weekly Course Content

Week 1	Computer networks and the Internet
Week 2	Application layer
Week 3	Application layer
Week 4	Transport layer
Week 5	Transport layer
Week 6	The network layer
Week 7	The network layer
Week 8	Midterm Exam
Week 9	The link layer and the local area networks
Week 10	Wireless and mobile networks
Week 11	Routers and IOS
Week12	Router configuration
Week 13	Router configuration
Week 14	VLAN configuration
Week 15	Final exam.

Course Learning Outcomes

1	Teaching of the basic concepts of computer networks and the internet
2	Teaching of the application layer
3	Teaching of the transport layer
4	Teaching of the network layer
5	Teaching of the router configuration
6	Teaching of the VLAN configuration

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.	4
02	The student will have the ability to identify, define, formulate and solve a problem in software and computer systems.	4
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.	4
05	The student will have the ability to design, implement and interpret experimental work and software projects by analyzing the results.	3
06	The student will have the ability to work between disciplines and teamwork.	4
07	The student will have the ability to work in international environments and adapt to different cultures.	3
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.	2
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.).	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.	4
13	The student will have the ability to find unusual ways and produce projects.	4
14	The student will have professional self-confidence, being an entrepreneur and taking initiative.	5
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	3	42
Out-of-class study time (pre-study, reinforcement)	10	2	20
Homeworks	3	3	9
Presentation / Seminar preparation	0	0	0
Quizzes	4	2	8
Preparation for midterm exams	1	8	8
midterm exams	1	2	2
Project (Semester assignment)	0	0	0
Lab	14	1	14
field work	0	0	0
Preparation for the final exam	1	15	15
Semester final exam	1	2	2
Research	3	8	24
TOTAL WORKLOAD			**144**
ECTS			**5**

Evaluation

SEMESTER EVALUATION	Number	Contribution Percentage
Midterm	1	20
Quiz	0	0
Homework	3	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	Computer Networking: A Top Down Approach , 5th edition. Jim Kurose, Keith Ross Addison-Wesley, April 2009.
Helpful Resources	Computer Networks, Fifth Edition, Andrew S. Tanenbaum, David J. Wetherall, Prentice Hall