COMMUNICATION NETWORKS

1	Course Title:	COMMUNICATION NETWORKS	
2	Course Code:	EEM4410	
3	Type of Course:	Optional	
4	Level of Course:	First Cycle	
5	Year of Study:	4	
6	Semester:	8	
7	ECTS Credits Allocated:	4.00	
8	Theoretical (hour/week):	3.00	
9	Practice (hour/week):	0.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:	-	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Doç. Dr. SAİT ESER KARLIK	
15	Course Lecturers:	-	
16	Contact information of the Course Coordinator:	E-posta:ekarlik@uludag.edu.tr Tel: (224) 294 20 95 Adres: Elektronik Mühendisliği Bölümü 5. Kat, No:529	
17	Website:		
18	Objective of the Course:	To gain sufficient background about architectures, implementation an operational principles of current communication networks; to determine and solve basic problems in communication networks; to determine performance of a communication network; to design a basic network; to develop and select proper transmission methods and devices for communication networks	
19	Contribution of the Course to Professional Development:		
20	Learning Outcomes:		
		1	To gain sufficient background about architectures, implementation an operational principles of current communication networks
		2	To determine basic problems in communication networks
		3	To solve basic problems in communication networks
		4	To determine performance of a communication network and to design a basic network
		5	To develop proper transmission methods for communication networks
		6	To select proper devices for communication networks
		7	
		8	
		9	
		10	
21	Course Content:		
	Course Content:		
Week	Theoretical		Practice

1	Introduction to communication networks, network types (LAN, MAN, WAN, wireless and private networks), OSI and TCP/IP reference models	
2	Network examples and standardization	
3	Physical layer standards	
4	Data-link layer- basic data-link protocols, protocol authentication, high level data-link control (HDLC), Internet data-link layer	
5	Medium access control (MAC) sublayer- static and dynamic channel allocation in LANs and MANs, multiple access protocols	
6	Data-link layer switching devices	
7	Network layer- network layer design principles, routing and congestion control algorithms	
8	Repeating courses and midterm exam	
9	Network layer - Quality of service (QoS), interoperability, internet network layer	
10	Transport Layer- Basic transmission protocols, Internet transmission protocols: UDP	
11	Internet transmission protocols: TCP, network performance	
12	Application layer- DNS and e-mail applications	
13	protocols, e-mail and web security	
14	Material preperation	
15		
16		

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	3.00	42.00
Practicals/Labs	0	0.00	0.00
Self study and preperation	14	4.00	56.00
Homeworks	0	0.00	0.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	2	20.00	40.00
Others	0	0.00	0.00
Final Exams	1	27.00	27.00
Total Work Load			165.00
Total work load/ 30 hr			5.50
ECTS Credit of the Course			4.00

TERM LEARNING ACTIVITIES	NUMBE	WEIGHT
Midterm Exam	2	50.00
Quiz	0	0.00
Home work-project	0	0.00
Final Exam	1	50.00
Total	3	100.00
Contribution of Term (Year) Learning Activities to Success Grade		50.00
Contribution of Final Exam to Success Grade		50.00
Total		100.00
Measurement and Evaluation Techniques Used in the Course		

24	**ECTS / WORK LOAD TABLE**

3. Bilgisayar Haberleşmesine Giriş, Rifat Onur Osman, Nobel Yayıncılık, 2006.

25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS															
	PQ1	**PQ2**	**PQ3**	**PQ4**	**PQ5**	**PQ6**	**PQ7**	**PQ8**	**PQ9**	**PQ10**	**PQ11**	**PQ12**	**PQ13**	**PQ14**	**PQ15**	**PQ16**
ÖK1	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK2	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK3	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK4	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
ÖK6	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
LO: Learning Objectives PQ: Program Qualifications																
Contribution Level:	**1 very low**		**2 low**		**3 Medium**		**4 High**			**5 Very High**						