Course Description Form

Course Code and Name	BM402 COMPUTER NETWORKS
Course Semester	8
Catalog Content	Delay, loss, throughput, layered architecture, Web, HTTP, FTP, email, DNS, P2P file sharing, TCP and UDP, reliable transfer, congestion control.
Textbook	James F. Kurose, Keith W. Ross, Computer Networking: A Top-Down Approach 7/E, Addison Wesley, 2016.
Supplementary Textbooks	- Andrew S. Tanenbaum, Computer Networks 5/E, Prentice Hall, 2010. - Behrouz A. Forouzan, Data Communications and Networking 4/E, McGraw-Hill, 2007.
Credit	4
Prerequisites of the Course **(** *Attendance Requirements***)**	-
Type of the Course	Compulsory
Instruction Language	Turkish
Course Objectives	To provide knowledge about delay, loss, throughput, layered architecture, Web, HTTP, FTP, email, DNS, P2P file sharing, TCP and UDP, reliable transfer, congestion control.
Course Learning Outcomes	Students who successfully complete this course have knowledge on the following topics: Delay, loss, throughput, layered architecture, Web, HTTP, FTP, email, DNS, P2P file sharing, TCP and UDP, reliable transfer, congestion control.
Instruction Methods	The mode of delivery of this course is face to face
Weekly Schedule	1.Week: Introduction to Computer Networks and Internet 2.Week: Delay, loss, throughput 3.Week: Layered architecture 4.Week: Architectures of network applications 5.Week: Web, HTTP, FTP, E-mail, DNS 6.Week: P2P file sharing 7.Week: TCP and UDP 8.Week: Transport layer services 9.Week: Reliable data transfer 10.Week: Connection oriented transport 11.Week: Congestion control 12.Week: Network layer services 13.Week: Network layer protocols 14.Week: Routing algorithms
Teaching and Learning Methods *(These are examples. Please fill which activities you use in the course)*	Weekly theoretical course hours: 3 Reading Activities Internet browsing, library work Report preparing Preparation of Midterm and Midterm Exam Final Exam and Preparation for Final Exam

Assessment Criteria

	Numbers	**Total Weighting (%)**
Midterm Exams	1	35
Assignment	4	25
Application	0	0
Projects	0	0
Practice	0	0
Quiz	0	0
Percent of In-term Studies (%)		60

Percentage of Final Exam to Total Score (%)		40	
Attendance			

Workload

Activity	Total Number of Weeks	Duration (weekly hour)	Total Period Work Load
Weekly Theoretical Course Hours	14	3	42
Weekly Tutorial Hours	0	0	0
Reading Tasks	14	1	14
Studies	14	1	14
Material Design and Implementation	0	0	0
Report Preparing	4	3	12
Preparing a Presentation	0	0	0
Presentations	0	0	0
Midterm Exam and Preparation for Midterm Exam	1	10	10
Final Exam and Preparation for Final Exam	1	12	12
Other (should be emphasized)	0	0	0
Total Workload			104
Total Workload / 25			4.16
Course Credit (ECTS)			4

Contribution Level Between Course Learning Outcomes and Program Outcomes

No	Program Outcomes	1	2	3	4	5
1	Sufficient knowledge on mathematics, science and computer engineering; ability to apply theoretical and practical knowledge in these areas to model and solve engineering problems				X	
2	Ability to identify, define, formulate and solve complex engineering problems; ability to choose and apply appropriate analysis and modelling methods for these purposes				X	
3	Ability to design a complex system, process, device, software, algorithm, or product under realistic constraints and circumstances to meet certain requirements; ability to apply modern design techniques for this purpose					X
4	Ability to choose, develop and use modern techniques and tools necessary for engineering applications; ability to effectively use computing technologies				X	
5	Ability to design and implement systems or experiments to solve engineering problems, collect and interpret data to evaluate and analyze the results of solutions		X			
6	Ability to work effectively in intradisciplinary and interdisciplinary teams or individually		X			
7	Ability to efficiently prepare, evaluate and interpret reports					X
8	Ability to make presentations and conduct effective verbal and written communication in Turkish and English	X				

	9	Awareness of the necessity of lifelong learning; ability to access information, follow scientific and technological developments; ability to perpetually renew oneself				X	
	10	Awareness of professional and ethical responsibility, ability to act in accordance with ethical principles				X	
	11	Ability to apply knowledge on project management, risk management and change management			X		
	12	Awareness of entrepreneurship and innovation, ability to design and build		X			
	13	Ability to devise local and global solutions to contemporary issues considering the effects of engineering applications on health, environment and security		X			
	14	Awareness of the legal consequences of engineering solutions		X			
	15	Ability to apply knowledge on software development process and documentation rules					X
	16	Knowledge on standards used in engineering applications					X
	17	Awareness of occupational health and security, information security and privacy		X			
The Course's Lecturer(s) and Contact Information	Prof. Dr. M. Ali AKCAYOL akcayol@gazi.edu.tr						