Course Description Form	
Course Code and Name	BM403 DATA COMMUNICATION
Course Semester	7
Catalog Content	Introduction, Network Models, Data and Signals, Digital transmission, Analog transmission, Multiplexing, Transmission medium, Switching, Use of telephone and cable TV lines in data communication, Error control, Error correction, Data link control, HDLC and PPP, Multiple access
Textbook	Forouzan B.A., Data Communications and Networking, 4/e, McGraw-Hill, 2007.
Supplementary Textbooks	Andrew S. Tanenbaum , David J. Wetherall, Computer Networks (5th Edition), Pearson, 2011. Stallings, W., Data and Computer Communications 8/e, Prentice Hall, 2006. Kurose, J.F., Ross, K.W., Computer Networking: A Top-Down Approach Featuring the Internet, Addison Wesley, 2004.
Credit	3
Prerequisites of the Course **(** *Attendance Requirements***)**	-
Type of the Course	Compulsory
Instruction Language	Turkish
Course Objectives	Teaching to understand the basic concepts of data communication, to learn the properties of analog and digital signals, to learn data link layer protocols are among the objectives of this course.
Course Learning Outcomes	1. To understand the basic concepts of data communication 2. To learn the properties of analog and digital signals 3. To learn data link layer protocols
Instruction Methods	The mode of delivery of this course is Face to face
Weekly Schedule	1. Week: Introduction 2. Week: Network Models 3. Week: Data and Signals 4. Week: Digital transmission 5. Week: Analog transmission 6. Week: Multiplexing 7. Week: Transmission medium 8. Week: Switching 9. Week: Use of telephone and cable TV lines in data communication 10. Week: Error control 11. Week: Error correction 12. Week: Data link control 13. Week: HDLC and PPP 14. Week: Multiple access

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
Preparation of Midterm and Midterm Exam
Final Exam and Preparation for Final Exam

Assessment Criteria

	Numbers	**Total Weighting (%)**
Midterm Exams	1	20
Assignment	4	15
Application		
Projects	1	10
Practice		
Quiz	5	15
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			
Reading Tasks	7	1	7
Studies	4	3	12
Material Design and Implementation			
Report Preparing			
Preparing a Presentation			
Presentations			
Midterm Exam and Preparation for Midterm Exam	1	5	5
Final Exam and Preparation for Final Exam	1	10	10
Other (should be emphasized)			
Total Workload			76
Total Workload / 25			3.04
Course Credit (ECTS)			3

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 sustainable systems	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. Suat Özdemir suatozdemir@gazi.edu.tr					