Course Description Form	
Course Code and Name	BM353 FUNDAMENTALS OF COMMUNICATION (TECH.ELECT.)
Course Semester	5
Catalog Content	Mathematical of message signals, amplitude and angle modulation techniques: amplitude modulation, double side band, single side band, redundant side band modulation, frequency modulation, phase locking loops, frequency division multiplexing, noise at amplitude and angle modulation, computer applications at communications.
Textbook	Digital Communications: Fundamentals and Applications 2/E, Bernard Sklar, Prentice Hall, 2017.
Supplementary Textbooks	- Fundamentals of Wireless Communication, Pramod Viswanath David Tse, Cambridge University Press, 2006. - Schaum's Outline of Signals and Systems 3/E, Hwei P Hsu, McGraw-Hill Education, 2013.
Credit	6
Prerequisites of the Course (*Attendance Requirements*)	-
Type of the Course	Technical Elective
Instruction Language	Turkish
Course Objectives	To provide knowledge about mathematical of message signals, amplitude and angle modulation techniques: amplitude modulation, double side band, single side band, redundant side band modulation, frequency modulation, phase locking loops, frequency division multiplexing, noise at amplitude and angle modulation, computer applications at communications.
Course Learning Outcomes	Mathematical of message signals, amplitude and angle modulation techniques: amplitude modulation, double side band, single side band, redundant side band modulation, frequency modulation, phase locking loops, frequency division multiplexing, noise at amplitude and angle modulation, computer applications at communications.
Instruction Methods	The mode of delivery of this course is face to face
Weekly Schedule	1.Week: Mathematical representation of the message signal 2.Week: Mathematical representation of the message signal 3.Week: Amplitude and angle modulation techniques: Amplitude modulation 4.Week: Amplitude and angle modulation techniques: Double side-band, single side band 5.Week: Now side-band modulation, frequency modulation 6.Week: Now side-band modulation, frequency modulation 7.Week: Phase-locked loops 8.Week: Phase-locked loops 9.Week: Frequency division multiplexing 10.Week: Frequency division multiplexing 11.Week: Amplitude and angle modulation systems noise 12.Week: Amplitude and angle modulation systems noise 13.Week: Computer applications in communications 14.Week: Computer applications in communications
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	30		
Assignment	5	30		
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				

	Activity	Total Number of Weeks	Duration (weekly hour)	Total Period Work Load
Workload	Weekly Theoretical Course Hours	14	3	42
	Weekly Tutorial Hours	0	0	0
	Reading Tasks	14	3	42
	Studies	14	3	42
	Material Design and Implementation	0	0	0
	Report Preparing	0	0	0
	Preparing a Presentation	0	0	0
	Presentations	0	0	0
	Midterm Exam and Preparation for Midterm Exam	1	12	12
	Final Exam and Preparation for Final Exam	1	12	12
	Other (should be emphasized)	0	0	0
	Total Workload			150
	Total Workload / 25			6
	Course Credit (ECTS)			6

	No	Program Outcomes	1	2	3	4	5
Contribution Level Between Course Learning Outcomes and Program Outcomes	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	

No		1	2	3	4
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