



K. S. SCHOOL OF ENGINEERING AND MANAGEMENT, BANGALORE - 560109

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

SESSION: 2022-2023(ODD SEMESTER)

LESSON PLAN

NAME OF THE STAFF : Dr.MANU D K

COURSE CODE/TITLE : 18EC53/PRINCIPLES OF COMMUNICATION SYSTEMS

SEMESTER/YEAR : V /III

Sl. No.	Topic to be covered	Mode of Delivery	Teaching Aid	No. of Periods	Cumulative No. of Periods	Proposed Date	Execution Date
MODULE 1							
1	AMPLITUDE MODULATION: Introduction, Amplitude Modulation:	L	BB	1	1	10-10-2022	10/10/22
2	Time & Frequency Domain description	L, PS	BB	1	2	11-10-2022	11/10/22
3	Switching modulator, Envelop detector.	L	BB	1	3	13-10-2022	13/10/22
4	DOUBLE SIDE BAND-SUPPRESSED CARRIER MODULATION: Time and Frequency Domain description, Ring modulator	L	BB	1	4	14-10-2022	14/10/22
5	Coherent detection, Costas Receiver	L	BB	1	5	15-10-2022	17/10/22
6	Quadrature Carrier Multiplexing	L	BB	1	6	17-10-2022	18/10/22
7	SINGLE SIDE-BAND AND VESTIGIAL SIDEBAND METHODS OF MODULATION: SSB Modulation, VSB Modulation,	L, PS	BB	1	7	18-10-2022	20/10/22
8	Frequency Translation	L,	BB	1	8	20-10-2022	21/10/22

9	Frequency- Division Multiplexing,	L	BB	1	9	21-10-2022	28/10/22
10	Theme Example: VSB Transmission of Analog and Digital Television.	L	BB	1	10	25-10-2022	10/11/22
	Assignment 1: Assignment Questions and Answer				11	27-10-2022	10/11/22
11	ANGLE MODULATION: Basic definitions, Frequency Modulation	L	BB	1	12	27-10-2022	10/11/22
12	Narrow Band FM, Wide Band FM, and Transmission bandwidth of FM Signals.	L, PS	BB	1	13	28-10-2022	15/11/22
13	Generation of FM Signals	L	BB	1	14	31-10-2022	18/11/22
14	Demodulation of FM Signal	L	BB	1	15	03-11-2022	17/11/22
15	FM Stereo Multiplexing	L	BB	1	16	04-11-2022	18/11/2022
16	Phase-Locked Loop:	L	BB	1	17	07-11-2022	19/11/2022
17	Nonlinear model of PLL	L	BB	1	18	08-11-2022	20/11/22
18	Linear model of PLL	L	BB	1	19	10-11-2022	29/11/2022
19	Nonlinear Effects in FM Systems.	L, PS	BB	1	20	12-11-2022	29/11/2022
20	The Superheterodyne Receive	L	BB	1	21	17-11-2022	01/12/2022
21	NOISE - Shot Noise, Thermal noise, White Noise	L	BB	1	22	18-11-2022	02/12/2022
22	Noise Equivalent Bandwidth NOISE IN ANALOG MODULATION: Introduction, Receiver Model	L	BB	1	23	21-11-2022	05/12/22
23	Noise in DSB-SC receivers.	L	BB	1	24	22-11-2022	06/12/22
24	Noise in AM receivers	L, PS	BB	1	25	24-11-2022	08/12/22

25	Threshold effect	L	BB	1	26	25-11-2022	09/12/22
26	Capture effect	L	BB	1	27	28-11-2022	12/12/22
27	Noise in FM receivers	L, PS	BB	1	28	29-11-2022	13/12/22
28	FM threshold effect	L	BB	1	29	01-12-2022	16/12/22
29	FM threshold reduction	L	BB	1	30	02-12-2022	19/12/22
30	Pre-emphasis and De-emphasis in FM	L	BB	1	31	05-12-2022	22/12/22
	Assignment 2: Assignment Questions and Answer				32	05-12-2022	26/12/22
31	SAMPLING AND QUANTIZATION: Introduction	L	BB	1	33	06-12-2022	27/12/22
32	Why Digitize Analog Sources?	L	BB	1	34	08-12-2022	02/01/23
33	The Low pass Sampling process	L, PS	BB	1	35	09-12-2022	05/01/23
34	Pulse Amplitude Modulation	L	BB	1	36	10-12-2022	05/01/23
35	Time Division Multiplexing	L	BB	1	37	12-12-2022	06/01/23
36	Time Division Multiplexing	L	BB	1	38	13-12-2022	06/01/23
37	Pulse-Position Modulation	L, PS	BB	1	39	15-12-2022	09/01/23
38	Pulse-Position Modulation	L, PS	BB	1	40	16-12-2022	09/01/23
39	Generation of PPM Waves	L	BB	1	41	22-12-2022	12/01/23
40	Detection of PPM Waves	L	BB	1	42	23-12-2022	13/01/23
41	SAMPLING AND QUANTIZATION (Contd): The Quantization Random Process,	L	BB	1	43	26-12-2022	16/01/23

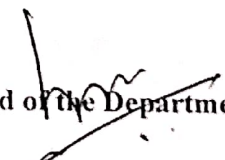
42	Quantization Noise, Pulse-Code Modulation:	L	BB	1	44	27-12-2022	18/01/23
43	Sampling, Quantization	L	BB	1	45	29-12-2022	18/01/23
44	Encoding	L	BB	1	46	30-12-2022	18/01/23
45	Regeneration	L	BB	1	47	31-12-2022	19/01/23
46	Decoding	L, PS	BB	1	48	02-01-2023	19/01/23
47	Filtering	L	BB	1	49	03-01-2023	20/01/23
48	Multiplexing	L	BB	1	50	05-01-2023	20/01/23
49	Delta Modulation	L, PS	BB	1	51	06-01-2023	23/01/2023
50	Application examples (a) Video + MPEG (b) Vocoders	L	BB	1	52	09-01-2023	24/01/23
	Assignment 3: Drawing/Demonstration:				53	10-01-2023	10/01/23
51	Revision	L	BB	1	54	12-01-2023	27/01/23
52	Revision	L	BB	1	55	13-01-2023	
53	Revision	L	BB	1	56	16-01-2023	
54	Revision	L	BB	1	57	17-01-2023	
55	Revision	L	BB	1	58	23-01-2023	
56	Revision	L	BB	1	59	24-01-2023	
57	Revision	L	BB	1	60	27-01-2023	


Total No. of Lecture Hours: 57

Total No. of Tutorial Hours: 0

	Mode of Assignment and Instructions	Date
Assignment 1	Assignment Questions and Answer: A total of 10 Assignment questions will be given from CO1 and CO2 to submit the descriptive answer in assignment book.	27-10-2022
Assignment 2	Assignment Questions and Answer: A total of 10 Assignment questions will be given from CO2 and CO3 to submit the descriptive answer in assignment book.	05-12-2022
Assignment 3	Drawing/Demonstration: Students are made into groups, and asked them to draw the relevant concepts of pre-assigned topic (CO4 and CO5) on A4 sheets or explain the working principle using PPT slides. Finally submit the report on the work they have carried out.	10-01-2023


Course In charge


Head of the Department
Professor & Head
Dept. of Electronics & Communication Engineering
K S School of Engineering & Management
Bangalore, 560 109


Principal
Dr. K. RAMA NARASIMHA
Principal/Director
K S School of Engineering and Management
Bangalore - 560 109