ANNAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES
KADAPA

INDEX

ANNMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES KADAPA

DEPARTMENT OF ECE

S.NO	Name of Courses	Teaching Methods																											
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1	COMPUTER ORGANIZATION(15A05402)																	✓											
2	ANTENNA & WAVE PROPAGATION(15A04501	✓			✓		✓	✓			✓			✓				✓				✓		✓		✓			✓
3	LINEAR INTEGRATED CIRCUITS & APPLICATIONS(15A04503)			✓														✓								✓			✓
4	DIGITAL COMMUNICATION SYSTEM(15A04502)		✓	✓				✓			✓			✓				✓				✓		✓					
5	MEMS & MICRO SYSTEMS(15A04506)	✓			✓		✓				✓			✓				✓		✓		✓	✓	✓		✓			
6	DIGITAL SYSTEM DESIGN(15A04504)																	✓											
7	SOCIAL VALUES & ETHICS(15A99501)		✓				✓											✓	✓				✓						
8	IC APPLICATIONS LABORATORY(15A04507)		✓			✓												✓	✓									✓	
9	DIGITAL COMMUNICATION SYSTEM LABORATORY(15A04508)		✓															✓	✓										

S.No	Teaching Method	S.No		S.NO	Teaching Method	S.No	Teaching Method
1	Industrial Interaction	8	Language Lab	15	Public Talks	22	Case Studies
2	Demonstration	9	Group discussions	16	Google classroom	23	Research Projects
3	Intemships	10	Training Programs	17	PPT	24	Worksheet
4	Workshops	11	Activity based learning	18	Viva	25	Project based learning
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6	Seminars	13	Guest Lectures	20	Hackathons	27	Virtual Labs
7	Reviews	I4	Flipped classrooms	21	Video lecturers	28	Poster Presentation

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DEPARTMENT OF CSE

S.NO	Name of Courses	Teaching Methods																										
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1	OPERATING SYSTEMS(15A05501)		✓				✓			✓								✓	✓			✓							
2	COMPUTER NETWORKS(15A05502)		✓		✓		✓	✓		✓							✓	✓	✓			✓		✓					
3	OBJECT ORIENTED ANALYSIS AND DESIGN(15A05503)		✓				✓			✓								✓	✓			✓							
4	PRINCIPLES OF PROGRAMMING LANGUAGES(15A05504)		✓				✓	✓		✓							✓	✓	✓			✓							
5	SOFTWARE TESTING(15A05505)	✓	✓	✓	✓		✓			✓		✓					✓	✓	✓		✓	✓							
6	R PROGRAMMING(15A05505)	✓	✓	✓	✓		✓	✓		✓		✓						✓	✓		✓	✓		✓					
7	OOAD & SOFTWARE TESTING LABORATORY(15A05509)		✓															✓	✓			✓							
8	OPERATING SYSTEMS LABORATORY (15A05510)		✓															✓	✓			✓							
9	SOCIAL VALUES & ETHICS(15A099501)		✓				✓						✓					✓	✓			✓							

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DEPARTMENT OF EEE

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1	ELECTRICAL MEASUREMENTS(15A02501)	✓	✓				✓					✓						✓	✓			✓		✓					
2	LINEAR &DIGITAL IC APPLICATIONS(15A04509)						✓											✓	✓			✓							
3	ELECTRICAL POWER TRANSMISSION SYSTEM(15A02502)	✓				✓	✓											✓	✓			✓							
4	POWER ELECTRONICS(15A02503)	✓				✓	✓											✓	✓			✓		✓					
5	ELECTRICAL MACHINES-III(15A02504)	✓					✓											✓	✓			✓		✓					
6	DIGITAL CIRCUITS & SYSTEMS(15A04510)						✓											✓	✓			✓							
7	ELECTRICAL MACHINES LAB-II(15A02506)	✓	✓				✓											✓	✓			✓		✓					
8	ELECTRICAL MEASUREMENTS LAB(15A02507)	✓	✓				✓											✓	✓			✓		✓					
9	SOCIAL VALUES & ETHICS(15A99501)						✓			✓								✓	✓			✓	✓						

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1	Industrial Interaction	8	Language Lab	15	Public Talks	22	Case Studies
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DEPARTMENT OF MECHANICAL

S.NO	Name of Courses	Teaching Methods																											
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1	FLUID MECHANICS AND HYDRAULIC MACHINES(15A01510)	✓			✓													✓	✓			✓							
2	THERMAL ENGINEERING-II(15A03501)	✓			✓		✓							✓				✓	✓			✓					✓		
3	DYNAMICS OF MACHINERY(15A03502)	✓			✓													✓	✓			✓							
4	MACHINE TOOLS(15A03503)	✓			✓		✓			✓								✓	✓			✓			✓		✓		
5	DESIGN OF MACHINE MEMBERS-I(15A03504)	✓			✓			✓						✓				✓	✓			✓			✓		✓		
6	ENTREPRENEURSHIP(15A03505)	✓					✓			✓								✓	✓	✓		✓							
7	FLUID MECHANICS AND HYDRAULIC MACHINES LABORATORY(15A01511)	✓	✓															✓	✓			✓							
8	MACHINE TOOLS LABORATORY(15A03508)	✓	✓															✓	✓			✓							
9	SOCIAL VALUES &ETHICS(15A99501)		✓															✓	✓										

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DEPARTMENT OF ECE

Year & Sem : III – I
Faculty: O. Homakesav

Subject Name : DIGITAL COMMUNICATION SYSTEMS
Subject Code :(15A04502)

TEXT BOOKS:

1. Simon Haykin, "Communication Systems", Wiley India Edition, 4th Edition, 2011.

2. B.P. Lathi, & Zhi Ding, "Modern Digital &Analog Communication Systems", 4th edition,Oxford University Press, International 2010.

REFERENCES BOOKS:

1. Sam Shanmugam, "Digital and Analog Communication Systems", 3rd Edition, John Wiley, 2005.

2. Bruce Carlson, and Paul B. Crilly, "Communication Systems – An Introduction to Signals & Noise in Electrical Communication", 5th Edition, McGraw-Hill International Edition, 2010.

3. Bernard Sklar, "Digital Communications", 2nd edition, Prentice-Hall PTR, 2001.

4. Herbert Taub and Donald L Schilling, "Principles of Communication Systems", 3 rd Edition,Tata McGraw-Hill, 2009.

S.NO	TOPIC(S)	BOOK REFERENCE	TEACHING METHODOLOGY
1	Source Coding Systems: Introduction,	T1	Black Board
2	sampling process	T1	Black Board
3	quantization, quantization noise,	T1	Black Board
4	conditions for optimality of quantizer, encoding, Pulse-Code Modulation (PCM),	T1	Black Board

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5	Line codes,	T1	Black Board
6	Differential encoding,	T1	Black Board
7	Regeneration, Decoding & Filtering, Noise considerations in PCM systems,	T1	Black Board
8	Time-DivisionMultiplexing(TDM), Synchronization,	T1	PPT
9	Delta modulation (DM)- Granular noise Slope over distortion,	T1	PPT
10	Differential PCM (DPCM),	T1	PPT
11	Processing gain, Adaptive DPCM (ADPCM), Comparison of the above systems,	T1	PPT
12	Illustrative Problems.	T1	Black Board
13	Baseband Pulse Transmission: Introduction	T1	Black Board
14	Matched filter,	T1	Black Board
15	Properties of Matched filter,	T1	Black Board
16	Matched filter for rectangular pulse,	T1	Black Board
17	Error rate due to noise,	T1	Black Board
18	Inter-symbol Interference (ISI),	T1	Black Board
19	Nyquist's criterion for distortion less baseband binary transmission,	T1	Black Board
20	ideal Nyquist channel,	T1	Black Board
21	raisedcosine filter & its spectrum,	T1	Black Board
22	Correlative coding – Duo binary & Modified duo binary	T1	Black Board

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	signalling schemes,		
23	Partial response signalling,	T1	Black Board
24	Baseband M-ary PAM transmission,	T1	Black Board
25	Eye diagrams,	T1	PPT
26	Illustrative Problems.	T1	Black Board
27	Signal Space Analysis: Introduction Geometric representation of signals,	T1	Black Board
28	Gram-Schmidt orthogonalization procedure Response of bank of correlators to noisy input,	T1	Black Board
29	Coherent detectionof signals in noise maximum likelihood decoder,	T1	Black Board
30	Probability of error,	T1	Black Board
31	Correlation receiver,	T1	Black Board
32	detection of signals with unknown phase, Illustrative Problems.	T1	Black Board
33	Pass band Data Transmission :Introduction	T1	Black Board
34	Passband transmission model,	T1	Black Board
35	Coherent modulation schemes- Generation and detection of binary phase shift keying (BPSK),	T1	PPT
36	Quadrature shift keying (QPSK),	T1	Black Board
37	Binary Frequency shift keying (BFSK).	T1	Black Board
38	Analysis of probability of error for BPSK, QPSK,	T2	Black Board

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39	BFSK,	T1	Black Board
40	Power spectra of above mentioned modulated signals.	T1	Black Board
41	Mary PSK,	T1	Black Board
42	Mary quadrature amplitude modulation (M-ary QAM),	T1	Black Board
43	Non-coherent orthogonal modulation schemes - Generation and detection of non-coherent BFSK,	T1	PPT
44	DPSK - analysis of probability of error and Comparison of power bandwidth requirements for all the above schemes,	T2	PPT
45	Illustrative Problems.	T1	Black Board
46	Channel Coding: Discrete memory less channels	T1	PPT
47	Linear Block Codes-Repetition codes, Syndrome decoding,	T1	Black Board
48	minimum distance considerations,	T1	Black Board
49	Cyclic codes- generator polynomial,	T1	Black Board
50	parity check polynomial,	T1	Black Board
51	encoder for cyclic code,	T1	PPT
52	calculation of syndrome,	T1	Black Board
53	Convolutional Codes	T1	Black Board
54	generator polynomials,	T1	Black Board
55	state diagrams,	T1	Black Board
56	Viterbi algorithm, Illustrative problems.	T1	Black Board

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