#132, AECS Layout, IT Park Road, Kundalahalli, Bangalore – 560 037
T:+9180 28524466 / 77

CMR INSTITUTE OF TECHNOLOGY

Session wise – Course Plan

Department of Telecommunication

SEMESTER : 4th Sem M.Tech
BRANCH : TCE
SUBJECT : ECC
SUB CODE : 14ECS41
No of HRS/WK : 5

NAME OF THE FACULTY : Rahul Nyamangoudar
DATE OF COMMENCEMENT : 05/01/2016
DATE OF CLOSING : 11/04/2016
CLASS STRENGTH : 11
TOTAL HRS : 70

Session No	Chapter no (No of hrs planed for chapter)	Date	Topics planned for the session	Teaching Aids	Assignments / Tests planned for the chapter	Topics covered As per plan
1	**1/0**	5/1/2016	Basics of Digital Communication and Need of Coding?	Board, chalk, duster		
2	**2/0**	5/1/2016	Types of Codes, Modulation and Coding	,,		
3	**3/0**	5/1/2016	Types of Errors, Maximum Likelihood decoding	,,		
4	**1/1**	11/1/2016	Introduction to Algebra - Groups	,,		
5	**2/1**	11/1/2016	Groups – Continued	,,		
6	**3/1**	11/1/2016	Fields and Binary Field Arithmetic	,,		
7	**4/1**	12/1/2016	Irreducible and Primitive Polynomials	,,		
8	**5/1**	12/1/2016	Construction of Galois Field GF(2^m)	,,		
9	**6/1**	12/1/2016	Basic Properties of Galois Field GF(2^m)	,,		

10	**7/1**	18/1/2016	Minimal Polynomial, Computations using Galois Field GF(2^m) Arithmetic.	Board, chalk, duster		
11	**8/1**	18/1/2016	Vector Spaces – subspace, span, Matrices – Generator and Parity Check	,,		
12	**9/1**	18/1/2016	Road Map from Groups to Matrices and Previous QP Discussion.	,,		
13	**1/2**	19/1/2016	Introduction to Linear Block Codes – Generator and Parity check Matrices	,,		
14	**2/2**	19/1/2016	Encoding Circuit and Problem	,,		
15	**3/2**	19/1/2016	Syndrome and Error Detection	,,	Assignment 1	
16	**4/2**	25/1/2016	Minimum Distance of Block Code	,,		
17	**5/2**	25/1/2016	Error detection and correction capabilities of linear block code	,,		
18	**6/2**	25/1/2016	Standard Array and Syndrome Decoding	,,		
19	**7/2**	1/2/2016	Hamming Codes	,,		
20	**8/2**	1/2/2016	(24,12) Golay Code, Product Codes, Interleaved Codes	,,		
21	**9/2**	1/2/2016	Reed Muller Codes – Construction	,,		
22	**10/2**	2/2/2016	Reed Muller Codes Decoding	,,		
23	**11/2**	2/2/2016	Reed Muller Codes Decoding – Contd	,,		
24	**12/2**	2/2/2016	Reed Muller Codes Decoding – Contd. And Previous Year QP Discussion.	,,		
25	**1/3**	8/2/2016	Cyclic Codes – Introduction and generator polynomial properties	,,		
26	**2/3**	8/2/2016	Construction of Cyclic Codes	,,		
27	**3/3**	8/2/2016	Generator and Parity Check Matrices and Encoding Circuit	Board, chalk, duster		
28	**4/3**	9/2/2016	Encoding Circuit using Parity Check Matrix	,,		
29	**5/3**	9/2/2016	Syndrome Computation and Error Detection	,,		
30	**6/3**	9/2/2016	Decoding of Cyclic Codes – Meggitt Decoder	,,		

31	**7/3**	15/2/2016	Decoding of Cyclic Codes – With r(x) shifted from right end	,,		
32	**8/3**	15/2/2016	Cyclic Hamming Codes	,,		
33	**9/3**	15/2/2016	Error Trapp Decoding	,,		
34	**10/3**	16/2/2016	Improved Error Trap Decoding	,,		
35	**11/3**	16/2/2016	(23,12) Golay Code	Board, chalk, duster		
36	**12/3**	16/2/2016	Shortened Cyclic Codes and Previous Year QP Discussion.	,,	Assignment 2	
37	**1/4**	22/2/2016	Binary BCH Codes – Introduction, Construction and Generator Polynomial	,,		
38	**2/4**	22/2/2016	Parity Check Matrix, Decoding of BCH Codes.	,,		
39	**3/4**	22/2/2016	Iterative Algorithm for finding the error location polynomial	,,		
40	**4/4**	23/2/2016	Implementation of Galois Field Arithmetic	,,		
41	**5/4**	23/2/2016	Implementation of Galois Field Arithmetic (Contd.)	,,		
42	**6/4**	23/2/2016	Implementation of Error Correction	,,		
43	**1/5**	29/2/2016	Non-Binary BCH Codes – q-ARY Linear Block Codes	,,		
44	**2/5**	29/2/2016	Primitive BCH Codes over GF(q)	,,		
45	**3/5**	29/2/2016	Reed Solomon Codes	,,		
46	**4/5**	1/3/2016	Decoding of Non-Binary BCH and RS Codes – Berlekamp Algorithm	,,		
47	**6/5**	1/3/2016	Berlekamp Algorithm (Contd.)	,,		
48	**7/5**	1/3/2016	Previous Year QP Discussion	,,		
49	**1/6**	8/3/2016	Majority Logic decodable codes: One -step majority logic decoding	,,		

50	**2/6**	8/3/2016	One -step majority logic decoding (Contd.)	Board, chalk, duster		
51	**3/6**	8/3/2016	Class of One-step majority logic decodable codes	,,		
52	**4/6**	14/3/2016	Two-step majority logic decoding	,,		
53	**5/6**	14/3/2016	Multiple-step majority logic decoding.	,,		
54	**6/6**	14/3/2016	Previous Year QP Discussion	,,		
55	**1/7**	15/3/2016	Convolution codes: Encoding of convolutional codes	,,	Assignment 3	
56	**2/7**	15/3/2016	Encoding of convolutional codes(Contd.)	,,		
57	**3/7**	15/3/2016	Encoding of convolutional codes(Contd.)	,,		
58	**4/7**	21/3/2016	Structural properties	,,		
59	**5/7**	21/3/2016	Distance properties	,,		
60	**6/7**	21/3/2016	Viterbi decoding algorithm for decoding	,,		
61	**7/7**	22/3/2016	Soft output Viterbi algorithm	,,		
62	**8/7**	22/3/2016	Stack and Fano sequential decoding algorithms	,,		
63	**9/7**	22/3/2016	Majority logic decoding. Previous Year QP Discussion.	,,		
64	**1/8**	28/3/2016	Concatenated codes and Turbo codes: Single level concatenated codes, Multilevel concatenated codes,	,,		
65	**2/8**	28/3/2016	Soft decision multistage decoding	,,		
66	**3/8**	28/3/2016	Concatenated coding schemes with convolutional inner codes	,,		
67	**4/8**	29/3/2016	Introduction to Turbo coding	,,		
68	**5/8**	29/3/2016	Distance properties of Turbo Coding	,,		
69	**6/8**	29/3/2016	Design of Turbo codes and Previous Year QP Discussion.	,,		
70	**1/9**	4/4/2016	Burst - error - Correcting codes: - Burst and random error correcting codes	,,	Assignment 4	

71	**2/9**	4/4/2016	Concept of interleaving, Cyclic codes for burst error correction – Fire codes	Board, chalk, duster		
72	**3/9**	4/4/2016	Convolutional codes for burst error correction	,,		
73	-	5/4/2016	Revision and QP Discussion	,,		
75	-	5/4/2016	Revision and QP Discussion	,,		
76	-	5/4/2016	Revision and QP Discussion	,,		

Signature of faculty Signature of HOD Signature of Principal

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CMR INSTITUTE OF TECHNOLOGY

Session wise – Course Plan

Department of Telecommunication

SEMESTER : Mtech 4th sem
BRANCH : TCE
SUBJECT : ACN
SUBJECT CODE :
NO OF HRS/WK : 4

NAME OF THE FACULTY : Miss Shruthi M
DATE OF COMMENCEMENT : 05.01.2016
DATE OF CLOSING : 11.04.2016
CLASS STRENGTH : 11
TOTAL HRS : 50

Session No	Chapter no (No of hrs planed for the chapter)	DATE	Topics planned for the session	Teaching Aids	Assignments/ Tests planned for the chapter	Topics covered As per plan
1	**1/1**	05.01.16	Unit-1- INTRODUCTION TO COMMUNICATION NETWORKS	Board, chalk, duster		
2	**2/1**	05.01.16	Telephone networks	,,		
3	**3/1**	06.01.16	Computer netorks	,,		
4	**4/1**	11.01.16	Multiple access	,,		
5	**5/1**	11.01.16	FDM, TDM, SM	,,		
6	**6/1**	12.01.16	Networking principles	,,	Assignment- I	
7	**1/2**	12.01.16	Unit -**2** LAN ETHERNET	,,		
8	**2/2**	18.01.16	Token ring	Board, chalk, duster		

9	**3/2**	18.01.16	FDDI	,,		
10	**4/2**	19.01.16	Circuit switching	,,		
11	**5/2**	19.01.16	Packet switching	,,		
12	**6/2**	25.01.16	Multicasting	,,	Assignment -II	
14	**1/3**	01.02.16	Unit –3 **Scheduling**	,,		
15	**2/3**	01.02.16	Performance bounds			
16	**3/3**	02.02.16	Best effort disciplines			
17	**4/3**	02.02.16	Naming and addressing			
18	**5/3**	08.02.16	Protocol stack	,,		
19	**6/3**	08.02.16	SDH & SONET	,,	Assignment –III	
21	**1/4**	09.02.16	Unit-4 ATM NETWORKS	,,		
22	**2/4**	09.02.16	AAL	,,		
23	**3/4**	15.02.16	Virtual circuits			
24	**4/4**	15.02.16	SSCOP	Board, chalk, duster		
25	**5/4**	16.02.16	Internet addressing	,,		
26	**6/4**	16.02.16	Routing, endpoint control	,,	Assignment –IV	
27	**1/5**	22.02.16	Unit 5 Internet Protocol	,,		
28	**2/5**	22.02.16	IP	,,		
29	**3/5**	23.02.16	TCP	,,		
30	**4/5**	23.02.16	UDP	,,		
31	**5/5**	29.02.16	ICMP	,,		
32	**6/5**	29.02.16	HTTP	,,	Assignment -V	

33	**1/6**	01.03.16	Unit-6 TRAFFIC MANAGEMENT	Board, chalk, duster		
34	**2/6**	07.03.16	Models	,,		
35	**3/6**	07.03.16	Classes	,,		
36	**4/6**	08.03.16	Scheduling	,,	Assignment 6	
40	**1/7**	08.03.16	Unit-7 CONTROL OF NETWORKS	,,		
41	**2/7**	14.03.16	QoS, static dynamic routing	,,		
42	**3/7**	14.03.16	Markov chains	,,		
43	**4/7**	15.03.16	Queuing models	,,		
44	**5/7**	15.03.16	Bellman ford algorithm	,,		
45	**6/7**	21.03.16	Dijktra's algorithm	,,		
46	**7/7**	21.03.16	Window & rate congestion control	,,		
47	**8/7**	22.03.16	Queue & network, control of ATM networks	,,		
53		28.03.17	Revision of Unit -1	,,		
54		28.03.17	Revision of Unit – 2	,,		
55		29.03.16	Revision of Unit –3	,,		
56		29.03.16	Revision of Unit –4	,,		
57		04.04.16	Revision of Unit –5	,,		
58		04.04.16	Revision of Unit –6	,,		
59		05.04.16	Revision of Unit –7	,,		

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