

GOPAL KRISHNA COLLEGE OF ENGINEERING AND TECHNOLOGY

GOURAHARI VIHAR, PO: RANIPUT, JEYPORE – 764 005

LESSON PLAN

Name of the Subject: PRINCIPLES OF COMMUNICATION SYSTEMS

Name of the Faculty: Subrat Prasad Rath

Semester: 4th Semester

Branch: ETC

Semester From: January to April

No. of Weeks: 15 Weeks

Week	Day	Theory/ Practical Topics	Classes
		UNIT 1- Spectral Analysis	4
1	1.	Energy Signal, Power Signal, Fourier series	1
	2.	Fourier transform, Energy Spectral Density	1
	3.	Power spectral density, Convolution, Parseval's theorem	1
	4.	Auto and Cross correlations	1
		UNIT 2- Analog Modulation	8
2	5.	Concept Of Modulation	1
	6.	Amplitude modulation: Double-Sideband Suppressed Carrier	1
	7.	Double-Sideband Full Carrier, Single Sideband and vestigial sideband modulation;	1
	8.	Demodulation: Carrier Recovery in AM	1
3	9.	coherent Demodulation	1
	10.	Envelope Detector, Square-Law Demodulator	1
	11.	spectrum of AM signal	1
	12.	Superheterodyne Receiver.	1
		UNIT 3-Frequency Modulation System	6
4	13.	Phase and frequency modulation and their relationship	1
	14.	Frequency deviation	1
	15.	spectrum of FM signal	1
	16.	BW of FM signal	1
5	17.	the effect of modulation on BW, narrowband FM	1
	18.	Armstrong and parameter variation methodsofFM generation.	1
	UNIT 4- Review of probability and random process		6
6	19.	Gaussian and white noise characteristics	1
	20.	Noise in amplitude modulation systems	1
	21.	Noise in Frequency modulation systems	1
	22.	Pre-emphasis and Deemphasis	2
	23.		

7	24.	Threshold effect in angle modulation	1
		UNIT 5- Pulse modulation	6
	25.	Sampling process	1
	26.	Pulse Amplitude and Pulse code modulation (PCM)	1
	27.	Differential pulse code modulation	1
8	28.	Delta modulation	1
	29.	Noise considerations in PCM	1
	30.	Time Division multiplexing, Digital Multiplexers	1
	31.		1

Books Recommended:

1. B.P. Lathi, Zhi Ding, Modern Analog and Digital communication Systems, Oxford , 4th Edition 2011
2. Michael Moher, Simon Haykin, Communications Systems, Wiley , 5th Edition 2009
3. Sanjay Sharma, Communication System, Katson books, 4th Edition, 2007