

Subject Code: 1ET4050501	Subject Title: Communication Engineering
Pre-Requisite	Basic Electronics, Signals and Communication.

RATIONALE:

Essential for presenting concepts and designs and critical to the engineering design process. Engineers with the ability to clearly communicate can confidently present their ideas to decision-makers in presentations, meetings, and reports.

COURSE OBJECTIVE:

To study analog and digital communication system to explain basics of analog and digital communication To explain analog and digital modulation schemes To explain analog and digital demodulation scheme

TEACHING AND EVALUATION SCHEME:

Teaching Scheme (Hours per week)				Evaluation Scheme (Marks)			
Lecture	Tutorial	Practical	Credit	Theory		Practical	
				University Assessment	Continuous Assessment	University Assessment	Continuous assessment
3	-	2	4	60	40	20	30

DETAILS OF COURSE CONTENTS:

Sr. No.	TOPIC	Total Hrs.	WEIGHTAGE
1	Introduction To Communication engineering 1.1Types of Signals 1.2Elements of Communication Systems, Sampling, 1.3Analog to Digital and Digital to Analog Converter, 1.4Shannon's Channel Capacity Theorem	10	18%
2	Analog Base 2.1Analog base band, Discrete base band, 2.2PAM, TDM, ISI, PWM and PPM, PCM, 2.3M-ary base band, Receivers, 2.4Performances and applications	06	15%
3	Amplitude Modulation 3.1Amplitude Modulation 3.2Modulators, DeModulators, 3.3Performance and Design 3.4Considerations and applications	08	25%
4	Frequency Modulation 4.1Frequency Modulation, 4.2Modulators, Demodulators,	06	15%

	4.3Performance and applications		
5	Phase Modulation 5.1 Phase Modulation 5.2Analog and digital phase modulation 5.3 Performance and applications	06	15%

COURSE OUTCOME:

1. Understand difference between analog and digital communication
2. Understand various analog and digital modulation Techniques
3. Understand analog and digital demodulation techniques

LIST OF PRACTICAL:

SR. No.	Experiment
1	Study of Modulation and De Modulation
2	Study of Sampling and Reconstruction
3	Study of ASK
4	Study of FSK
5	Study of PSK
6	Study of QPSK
7	Study of BPSK
8	Study of QAM
9	Study of Digital Detection Techniques
10	Study of one Digital Communication System

Text Book:

- (1) “Analog and Digital Communication System”, Martin S.Roden, SPD Publications
- (2) “Communications Systems: Analog and Digital”, R.P. Singh and S.D.Sapre, TMH

LIST OF REFERENCES:

Sr.no.	Title	Author
1	Handbook Series of Electronics & Communication Engineering	Made Easy Editorial Board
2	Question Bank in Electronics and Communication Engineering	Prem R Chadha