

Analog and Digital Communication Lab

Course Code	23EC3552	Year	III	Semester	I
Course Category	PC	Branch	ECE	Course Type	Lab
Credits	1.5	L-T-P	0-0-3	Prerequisites	---
Continuous Internal Evaluation:	30	Semester End Evaluation:	70	Total Marks:	100

Course Outcomes		
Upon successful completion of the course, the student will be able to		BL
CO1	Analyze the parameters of Analog modulation Techniques	L4
CO2	Analyze the parameters of Pulse modulation Techniques	L4
CO3	Evaluate the performance baseband and Band pass modulation techniques.	L5
CO4	Analyze the performance of source coding and channel coding techniques.	L4

Contribution of Course Outcomes towards achievement of Program Outcomes & Strength of Correlations (3:High, 2:Medium, 1:Low)

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	3			3				2			2	3	
CO2	3	3			3				2			2	3	
CO3	3	3	3		3				2			2	3	
CO4	3	3			3				2			2	3	
Average	3	3	3		3				2			2	3	

Note: All the below experiments are to be executed/completed using either hardware boards or MATLAB. Minimum of **Ten** Experiments has to be performed

Syllabus		
Expt. No.	Contents	Mapped CO
1	Amplitude Modulation and Demodulation	CO1
2	DSBSC modulation and Demodulation	CO1
3	Frequency modulation and Demodulation	CO1
4	Pre-emphasis and De-emphasis	CO1
5	PAM, PWM, PPM Signal Generation and Demodulation	CO2
6	Time Division Multiplexing	CO2
7	Verification of Sampling Theorem	CO2
8	Pulse code modulation	CO3
9	Delta modulation.	CO3
10	Phase shift keying.	CO3
11	Frequency shift keying.	CO3
12	Spread Spectrum modulation	CO3
13	Source Encoder and Decoder	CO4
14	Channel Encoder and Decoder	CO4

Learning Resources	
Text Books	
1.	Simon Haykin, Michael Moher, Communication Systems, Wiley India, 5 th Ed., 2022
2.	John G Proakis, Masoud Salehi, Digital Communications, McGraw Hill Education, 5 th Ed., 2014
Reference Books	
1.	H Taub & D. Schilling, Gautam Sahe, . Principles of Communication Systems, Mc Graw Hill Education, 4 th Ed., 2013
2.	Sam Shanmugam, Analog and Digital Communication System, John Wiley and Sons, 3 rd Ed., 2009
e- Resources & other digital material	
1.	https://www.youtube.com/playlist?list=PLC7D3EAEFA0CC0420&app=desktop
2.	https://nptel.ac.in/courses/108/105/108105159/