Sardar Patel Institute of Technology

Bhavan's Campus, Munshi Nagar, Andheri (West), Mumbai-400058-India
(Autonomous Institute Affiliated to University of Mumbai)

Course Code	Course Name	Teaching Scheme (Hrs/week)			Credits Assigned			
		L	T	P	L	T	P	Total
ELL44	Fundamentals of Communication Engineering Lab	--	--	2	--	--	1	1
		Examination Scheme						
		ISE			ESE			Total
					Practical		Oral	
		40			--		20	60

Pre-requisite Course Codes		EL44 (Fundamentals of Communication Engineering)
After successful completion of the course, student will be able to		
Course Outcomes	CO1	Implement the circuit and observe the working principle of analog modulation techniques
	CO2	Implement the circuit and analyze the working principle of analog demodulators
	CO3	Make use of simulation software to study given communication circuits
	CO4	Implement circuits for analog pulse modulation techniques like PAM, PPM and PWM to observe modulated waveforms
	CO5	Implement the circuit for generation of natural sampling and its effect on reconstruction of the wave.
	CO6	Work in a team to implement the given communication circuit

Exp. No.	Experiment Details	Ref.	Marks
1	Simulation and implementation of double sideband full carrier for various modulation index	1,2	5
2	Implement the frequency modulation circuit to obtain FM waveforms and calculate modulation index	1	5
3	Analyze effect of pre-emphasis and de-emphasis on FM waveforms	1	5
4	Implementation of natural sampling and reconstruction of waveforms	1	5
5	Implementation and detection of pulse amplitude modulation.	2	5
6	Implementation of pulse width modulation	2	5
7	Implementation of pulse position modulation.	1,2	5
8	**Mini-Project:** Demonstrate the working of given communication circuits using simulation tools like TINA/Matlab/Scilab/LabVIEW.	1,2, 3	5
		Total Marks	**40**

References:

[1] Wayne Tomasi "Electronics communication systems" Pearson education, Third edition, 2001.

[2] Kennedy and Davis "Electronics communication system", Tata McGraw Hill. Fourth Edition.

[3] B.P. Lathi "Modern Digital and analog Communication system" Third edition, OXFORD