Course Number and Name
BEC4L2 - LINEAR INTEGRATED CIRCUITS LAB

Credits and Contact Hours
2 & 45

Course Coordinator's Name
Mr S.Rajesh

Text Books and References
Lab Manual

Course Description
• To apply operational amplifiers in linear and nonlinear applications. • To acquire the basic knowledge of special function ICs. • To use SPICE software for circuit design.

Prerequisites	Co-requisites
BEE1L1-Basic Electrical &Electronics Engineering practices Lab	BEC405-Linear Integrated circuits

required, elective, or selected elective (as per Table 5-1)
required

Course Outcomes (COs)

CO1: Design and analyse the various linear application of op-amp.
CO2 : Design and analyse the various non-linear application of op-amp.
CO3 : Design and analyse filter circuits using op-amp
CO4 : Design and analyse oscillators and multivibrator circuits using op-amp
CO5: Design and analyse the various application of 555 timer.
CO6 : Analyse the performance of oscillators and multivibrators using PSPICE.

Student Outcomes (SOs) from Criterion 3 covered by this Course

COs/SOs	a	b	c	d	e	f	G	H	I	j	k
CO1	H		H	H		M		L			
CO2	H		H	H					M	L	
CO3	M	M	M	H	M			H	M	M	
CO4	M		M	H					M		
CO5	M		M	H					H		
CO6	H	M	M	H	M				H	M	

List of Topics Covered

1. Inverting and noninverting amplifier
2. Integrator , differentiator
3. Summer,subtractor using op-amp
4. Triangular wave generator using op-amp
5. RC Phase shift Oscillator using op-amp
6. Schmitt trigger using Op-amp
7. Active low pass and high pass filters.
8. Astable Multivibrator using 555 timer
9. Monostable multivibrator using 555 timer
10. Schmitt trigger using 555 timer
11. Voltage controlled Oscillator.
12. PLL characteristics.
13. Study of SMPS.

SIMULATION USINGSPICE

14. Simulation of Experiments , 4, 5, 6 ,7 and 8..
15. CMOS Inverter, NAND and NOR