III B.Tech – I Semester (17EC512) LINEAR INTEGRATED CIRCUIT ANALYSIS LAB

Int. Marks	Ext. Marks	Total Marks	L	Т	Р	С
60	40	100	-	-	3	2

Pre-Requisites: Electronic Devices and Circuits, Pulse and Digital Circuits

Course Objectives:

- To understand the linear and non-linear applications of operational amplifiers(741)
- To familiarize with theory and applications of 555 timers.
- To design and construct waveform generation circuits using Op-Amp
- Determine the voltage transfer characteristics of non linear circuits and also learn about comparators

List of Experiments:

- 1. Study of ICs IC 741, IC 555, IC 565, IC 566, IC 1496 functioning, parameters and specifications.
- 2. OP AMP Applications Adder, Sub tractor, Comparator circuits.
- 3. Integrator and Differentiator Circuits using IC 741
- 4. Active Filter Applications 1st order LPF,HPF
- 5. Active Filter Applications -1^{st} order BPF,BEF(wide band) and Notch.
- 6. Phase Shift and Wien Bridge Oscillators using IC 741.
- 7. Function Generator using IC 741.
- 8. Monostable Multivibrator using IC 555.
- 9. As table Multivibrator using IC 555. 10..Schmitt Trigger using IC 741 & IC 555
- 10. IC 565 PLL Applications.
- 11. IC 566 VCO Applications.
- 12. Voltage Regulator using IC 723
- 13. Three Terminal Voltage Regulators-7805,7809,7912
- 14. 4 bit DAC using IC 741.

Course Outcomes:

After successful completion of the course, the students can be able to:

S. No	Course Outcome	BTL
1.	Perform various Op-Amp circuits in different applications	L2
2.	Perform various IC -555 circuits in different applications.	L2
3.	Perform various IC -565 circuits in different applications.	L2
4.	Implementation of voltage regulators using ICs.	L3
5.	Analysis of active filters using ICs.	L4

Correlation of COs with POs & PSOs:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	1	1	3	3	1	1			2	1			1	2
CO 2	1	1	3	1	1	1			2	1			1	
CO 3	1	1	3	2	1	1			2	1			1	
CO 4	1	1	3	3	1	1			2	1			1	
CO 5	1	1	3	1	1	1			2	1			1	