Course No.	Course Name	L-T-P-Credits	Year of Introduction
BM232	ANALOG CIRCUITS LAB	0-0-3-1	2016

Prerequisite : BM204 Integrated circuits and systems

Course Objectives

To get the students familiarized with the Integrated Circuits and to learn to design, set up and analyze circuits using active devices, op-amps and other ICs.

List of Exercises/ Experiments (Minimum 12 are mandatory)

1. Amplifiers using active devices
2. Oscillators - RC phase shift, Wein Bridge & Crystal oscillators
3. Multivibrators using active devices- Astable, Bistable, Monostable.
4. Study of 741 op amp and implementation of basic circuits using 741 – Inverting, non inverting, voltage follower
5. Summing and difference amplifiers using op-amp
6. Comparator circuits using op-amp
7. Active first and second order high pass & low pass filters
8. Active Integrator & differentiator circuits
9. Instrumentation amplifier
10. Study of 723 IC
11. Study of IC 555 and its applications
12. Notch filter
13. DAC
14. ADC
15. Study of IC 4051 and its applications
16. Precision rectifiers
17. Narrow Band pass filter
18. Waveform generators (multivibrators and oscillators) using op-amps

Equipments needed: Bread boards, Multimeters, Fixed and Variable DC power supplies, CROs, Function Generators, Electronics Circuit Simulation software like LTspice

Expected Outcome

At the end of the course the student will

- Understand the design of basic electronic circuits using a combination of passive and active components
- Familiarize with basic electronic circuits using op amps
- Understand to design and find the applications of specialized ICs
- Tabulate the results and document them properly.

Text Book:

Ramakant A. Gayakwad, “Op-Amps and Linear Integrated Circuits”, Pearson Education Asia. 4th ed.