Course code	Course Name	L-T-P - Credits	Year of Introduction
EC234	Linear Integrated Circuits and Digital Electronics Laboratory	0-0-3--1	2016

Prerequisite: EC212 Linear integrated circuits and digital electronics

Course Objectives

- To study various digital and linear integrated circuits used in simple system configuration

List of Exercises/Experiments : (10 experiments are mandatory**)**
1. Operational Amplifiers (IC741)-Characteristics

2. Square , triangular and ramp generation using op-amps

3. Log and Antilog amplifiers.

5. Astable and monostable multivibrators using op-amps

6. Active notch filter realization using op-amps

7. Wein bridges oscillator using OpAmp

8.OpAmp Integrator and Differentiator.

9.Code converter - Binary to gray and Gray to binary.

10.Adder and Subtractor Circuits using logic IC

11.Implementation of combinational logic circuits using MUX IC

12.Design and implementation of multiplexer and demultiplexer.

13.3-bit synchronous counter design

14.Asynchronous counter design and Mod-n counter

15.Shift registers - SISO/SIPO & PISO/PIPO

16.Ring and Johnson Counters

List of major equipment
CRO, Function generator , Single power supply , Dual power supply, Digital multimeter, Ammeter ,Voltmeter.

 Expected outcome .
On completion ,the students will be able to
1. Design simple circuits like amplifiers using OP-AMPs.
2. Design waveform Generating circuits.
3. Understand Digital concepts
4. Logically explain the concepts of combinational and sequential circuits.

 Text Book:
1.RamakantA.Gayakward, Op-amps and Linear Integrated Circuits, IV edition, Pearson Education, 2003 / PHI.
2. D.RoyChoudhary, SheilB.Jani, Linear Integrated Circuits, II edition, New Age, 2003.
3. M. Morris Mano, Digital Logic and Computer Design, Prentice Hall of India, 2002