B.Tech II Year II Semester

IC APPLICATIONS LAB

Course Code: 21EC408PC **L/T/P/C: 0/0/3/1.5**

Course Objectives:

- Comprehend basic integrated circuits.
- Fundamentals of analog integrated circuits.
- Fundamentals of digital integrated circuits.
- Design methodologies using practical integrated circuits.
- The application areas of integrated circuits.

Course Outcomes:

- Design and analyze the various linear application of op-amp.
- Design and analyze the various non-linear application of op-amp.
- Design and analyze filter circuits using op-amp
- Design and analyze the various application of 555 timer like oscillators and multivibrator circuits
- Design and analyze various combinational & sequential logic circuits using Digital Integrated IC's.

Minimum 6 Experiments should be conducted from each part.

PART – I: Linear IC Experiments

- Op-Amp Inverting and Non-Inverting Amplifiers.
- Adder, Subtractor.
- Function Generator.
- Active Filter LPF&HPF (first order)
- Oscillators-RC& Wein Bridge
- IC 555 Timer – Monostable and Astable Multivibrator
- Voltage Regulator using IC 723, Three Terminal Voltage Regulators – 7805, 7809, 7912.
- DAC-Weighted and R-2R

PART – II: Digital IC Applications

- 3-8 decoder using IC74138
- 4-bit comparator IC7485.
- 8*1 Multiplexer IC74151 and 2*4 Demultiplexer IC74155.
- D Flip Flop IC7474.
- Decade counter IC 7490.
- UP/DOWN counter IC 74193
- Shift registers using IC74194/195.