Course Name Basic Electronics Engineering Laboratory

Course Code EC(EE)291

Course Credit 2

Contact Hour 3P

Prerequisite

Course Objective

The objectives of this course are

Course Outcome

On completion of the course students will be able to

1. Identify different types of passive and active electronic components, apply signals through signal generators and measure signals using CRO, Multimeter etc
2. Demonstrate and analyse the characteristics for PN junction diode, Zener diode.
3. Describe the regulator circuit and analyse the parametric observation
4. Demonstrate and analyse the characteristics for BJT, FET.
5. Explain the limits on observation of various parameters of OP-AMP.

CO Mapping with departmental POs

H: High, M: Medium, L: Low

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
CO 1	H	H	M		L		H		M			H
CO 2	H	H	M		L	M		M				H
CO 3	H	H		L		H	M			H		H
CO 4	H	H	H		M			L				H
CO 5	H	H		M		M		L		M		H

Course Content

List of experiments

1. Familiarization with passive and active electronic components such as Resistors, Inductors, Capacitors, Diodes, Transistors (BJT) and electronic equipment like DC power supplies, millimeters etc.
2. Familiarization with measuring and testing equipment like CRO, Signal generators etc.
3. Study of I-V characteristics of Junction diodes.
4. Study of I-V characteristics of Zener diodes.
5. Study of Half and Full wave rectifiers with Regulation and Ripple factors.
6. Study of I-V characteristics of BJTs.
7. Study of I-V characteristics of Field Effect Transistors.
8. Determination of input-offset voltage, input bias current and Slew rate of OPAMPs.
9. Determination of Common-mode Rejection ratio, Bandwidth and Off-set null of OPAMPs.
10. Study of OPAMP circuits: Inverting and Non-inverting amplifiers, Adders, Integrators and Differentiators.
11. Study of Logic Gates and realization of Boolean functions using Logic Gates.
12. Study of Characteristic curves for CB, CE and CC mode transistors.