II Year I Semester	**L**	**T**	**P**	**C**
Code: 20EE3104	**0**	**0**	**3**	**1.5**

ANALOG ELECTRONICS LAB

Course Objectives:

1. To plot the characteristics of PN Junction Diode, BJT, FET and UJT
2. To observe the applications of PN Junction Diode as rectifiers
3. To design and implement amplifier circuits and multivibrators

Course Outcomes:

A student who successfully fulfils this course requirement will be able to:

1. Understand the characteristics of PN Junction Diode, BJT, FET and UJT and obtain their parameters
2. Describe the regulation process of Half and full wave rectifiers
3. Plot the switching action of a BJT
4. Observe the frequency responses of CE and CS amplifiers
5. Design and analyze the functionality of Multivibrators

List of Experiments:

1. P-N Junction Diode Characteristics
   Part A: Germanium Diode (Forward bias & Reverse bias)
   Part B: Silicon Diode (Forward Bias only)
2. Half-wave Rectifier (without and with C-filter)
3. Full-wave Rectifier (without and with C-filter)
4. BJT CE Characteristics
   Part A: Input Characteristics
   Part B: Output Characteristics
5. Transistor as a Switch
6. FET Characteristics
   Part A: Drain Characteristics
   Part B: Transfer Characteristics
7. UJT Characteristics
8. Common Emitter Amplifier
9. Common Collector Amplifier
10. Monostable Multivibrator
11. Astable Multivibrator
12. Schmitt Trigger

Equipment required:

1. Regulated Power supplies
2. Analog/Digital Storage Oscilloscopes
3. Analog/Digital Function Generators
4. Digital Multi-meters
5. Decade Resistance Boxes/Rheostats
6. Decade Capacitance Boxes
7. Ammeters (Analog or Digital)

8. Voltmeters (Analog or Digital)
9. Active & Passive Electronic Components

Correlation of COs with POs & PSOs:

CO	PO1	PO2	PO3	PO 4	PO5	PO6	PO7	PO8	PO 9	PO1 0	PO1 1	PO1 2	PSO 1	PSO 2	PSO 3
CO 1	1	2	-	-	2	-	-	-	3	-	-	-	3	1	-
CO 2	2	2	1	-	3	-	-	-	3	-	-	-	3	1	-
CO 3	1	2	2	-	3	-	-	-	3	-	-	-	3	1	1
CO 4	2	2	2	1	3	-	-	-	3	-	-	-	3	2	1
CO 5	2	3	3	2	3	-	-	-	3	-	-	-	3	2	1