ANALOGUE AND DIGITAL COMMUNICATIONS LAB

(Core Subject)

Course Code:	17B11EC471	Semester:	4th Semester, B. Tech (ECE)
Credits:	1	Contact Hours:	L-0, T-0,P-2

Course Objectives
1. Familiarize the students with basic analog communication systems.
2. Integrate theory with experiments so that the students appreciate the knowledge gained from the theory course, e.g., amplitude and frequency modulation.
3. Familiarize the student digital communication techniques which are widely used these days.
4. At the conclusion of the course, the student should have a far greater capacity to design, any communication system

Course Learning Outcomes
After studying this course the students shall be able to:
1. Able to design analog modulation circuits as amplitude and frequency modulation.
2. Design various line coding techniques.
3. Design the circuit to convert analog signals to digital signals.
4. Design different digital modulation circuits

List of Experiments

1. To design and implement Amplitude modulator and Demodulator.

2. To design and implement Frequency Modulator and Demodulator.

3. To design and implement Pulse Amplitude Modulator (PAM), Pulse Width Modulator (PWM), Pulse Position Modulator (PPM).

4. To design and implement sample and hold circuit.

5. Design and Generation of random binary signals.

6. Generation Unipolar NRZ, Polar NRZ, Unipolar RZ and Polar RZ line codes.

7. Design and implementation of Delta Modulator for analogue signals

8. Design, implementation and study of BASK Modulator and demodulator

9. Design, implementation and study of BPSK Modulator and demodulator.

10. Design, implementation and study of BFSK Modulator and demodulator

Evaluation Scheme

1. Mid Sem Evaluation   20 Marks
2. End Sem Evaluation   20 Marks

3.	Attendance	15 Marks
4.	Class response	30 Marks
5.	File	15 Marks

Total Marks   **100 Marks**

Text Books

1. Haykin, Simon : An introduction to analog and digital communications. John Wiley & Sons.

2. Lathi, B.P.   : Modern Analog and Digital Communication Systems. Oxford.