

COURSE CODE	COURSE TITLE	L	T	P	C
1151EC305	COMMUNICATION LAB	0	0	2	1

**a. Course Category:**

Program Core

**b. Preamble:**

This course provides to demonstrate about all types of modulation techniques for both analog and digital communication systems

**c. Pre-requisites:**

Basic Electronics Engineering, Analog Electronics, Analog Communication Systems

**d. Related Courses:**

Nil

**e. Course Outcomes:**

Upon the successful completion of the course, students will be able to

CO'S	Course Outcomes	Level of learning domain (Based on revised Bloom's)
CO1	Design and testing of amplitude, frequency modulators and demodulators and calculate modulation Index using analog circuits and simulation software.	S3
CO2	Demonstrate the frequency response of various analog communication sub systems used in the receiver.	S3
CO3	Design and implement various digital communication systems like coder, decoder and equalizers using simulation software.	S3
CO4	Design and implement various digital modulation techniques using simulation software.	S3

**g) List of Experiments**

Cycle-I

- 1.Design and testing of Amplitude Modulation and Demodulation.
- 2.Study of DSB-SC Modulation and Demodulation.
- 3.Design and testing of Pre emphasis and De emphasis circuits
- 4.Design and testing of Frequency Modulation and Demodulation.
- 5.Frequency Response of Mixer Circuit.
- 6.Frequency Response of IF Amplifier.
- 7.Implementation of noise analysis in AM and FM system using MATLAB.

**Cycle-II**

- 1.Design and implementation of Linear Block Coder and decoder
- 2.Design and implementation of Cyclic Coder and decoder
- 3.Design and implementation of Convolution Coder and decoder
- 4.Design and Implementation of Delta Sigma modulator, ADM
- 5.Design and Implementation of Delta Pulse Code modulator
- 6.Design and Implementation of Digital ModulationSchemes (ASK, PSK, FSK, DPSK)