Course Number and Name

BEC5L3 - COMMUNICATION ENGINEERING LABORATORY-I

Credits and Contact Hours

2 and 45

Course Coordinator's Name

Mr R.Mohan Raj

Text Books and References

Lab Manual

Course Description

- To practice the basic theories of analog communication system.
- To use computer simulation tools such as P-SPICE, or Matlab to carry out design experiments as it is a key analysis tool of engineering design.
- To give a specific design problem to the students, which after completion they will verify using the simulation software or hardware implementation.

Prerequisites	Co-requisites
Nil	COMMUNICATION ENGINEERING - I

required, elective, or selected elective (as per Table 5-1)

required

Course Outcomes (COs)

CO1 To develop practical knowledge about theories of analog communication

CO2 To develop practical knowledge about simulation software

CO3 To provide hands-on experience to the students, so that they are able to apply theoretical concepts in practice.

CO4 Demonstrate various pulse modulation techniques

CO5 Evaluate analog modulated waveform in time /frequency domain and also find modulation index

CO6 Develop understanding about performance of analog communication systems

Student Outcomes (SOs) from Criterion 3 covered by this Course

COs/SOs	a	b	c	d	e	f	g	h	i	j	k
CO1	H	M				M		L	M		L
CO2	M										
CO3	M	M	M	H						L	
CO4	M	M	M		H		M		H		H
CO5		L	M					M			
CO6	M					H				H	

List of Topics Covered

1. AM modulator and Demodulator.
2. DSB-SC modulator and Demodulator.
3. SSB modulator and Demodulator.
4. FM modulator and Demodulator.
5. PAM modulator and Demodulator.
6. TDM Multiplexer and Demultiplexer.
7. FDM Multiplexer and Demultiplexer.
8. Pre emphasis and De-emphasis in FM.
9. Simulation experiments using P-SPICE and Matlab.
   i) AM modulator with AWGN noise in Matlab.
   ii) Pre-emphasis and De-emphasis in FM usingP-SPICE**.**