SUBJECT NO-EC31001, SUBJECT NAME- ANALOG COMMUNICATION
LTP- 3-1-0,CRD- 4

SYLLABUS :-

Pre-requisites: EC21004 or EE (Signals and Networks) Representation of signals and systems in a communication system: Discrete and continuous spectra of signals, concepts of modulation and frequency translation, lowpass and bandpass signals and channels, concept of complex envelope, Hilbert transform and phase shifting; Continuous wave (CW) modulation: AM, DSB/SC, SSB, VSB, methods of generation; Demodulation techniques of CW modulation: coherent and non-coherent; Nonlinear modulation techniques: FM and PM, narrowband FM, wideband FM, methods of generation; FM spectrum; Demodulation techniques for FM; Frequency Division Multiplexing (FDM); Radio transmitters and receivers; Sampling a signal by periodic pulse stream: spectra of ideally sampled signal, Nyquist sampling theorem, flat-top sampling, sampling of bandpass signals, examples of sampling circuits; PAM, PWM, PPM, PFM â spectra, generation and demodulation schemes; Time-division multiplexing; Performance of analog modulation schemes in AWGN : CNR, post-demodulation SNR and figure of merit for AM, DSB/SC, SSB, FM, threshold effect in FM, pre-emphasis and de-emphasis in FM, FMFB. Noise in receivers; Noise figures; Radio link design.