

EEE 332 Communication Principles

Telecommunication fundamentals, industry history, regulations, standards (local and global). Analogy between vectors and signals: orthogonal functions, periodic function by the Fourier series, Fourier transform and convolution. Amplitude modulation; double sideband, single sideband and vestigial sideband modulation schemes; simple modulators, power and bandwidth performance. Angle modulation; frequency modulation, phase modulation, bandwidth requirements, clippers and limiters. Amplitude modulated signal reception; discrimination, frequency tracking loop, phase locked loop and noise performance. Commercial radio systems, Transmission media; attenuation in open space, air cable and fiber channels; construction of cables and fibers, sampling theorem, pulse amplitude modulation, pulse width modulation, multiplicity, quantization systems and pulse code modulation, delta modulation, courses and correction of errors in PCM and DM.