

THIRD YEAR

Digital Communication I	COE302
Prerequisite : COE209	(3-2-1-2)

Introduction: Basic Elements of Digital Communication Systems, Communication Channels. Pulse Modulation Techniques: PAM, PWM, PPM. PCM, DPCM, DM, Adaptive Delta Modulation (ADM), Noise in pulse modulations. Digital Modulation Techniques: ASK, PSK, FSK, QPSK, DPSK, DEPSK, MSK, M-ary-FSK, M-ary-PSK, QAM, M-ary-QAM. Optimum Receivers for the AWGN Channel: Receiver for Signals Corrupted by AWGN, Performance of Memoryless Modulation, Trade off of power, bandwidth, data rate, and error probability. Multiplexing Techniques: TDM, FDM, applications.

Practical part: Representation of Digital Signals. Pulse Modulations. M-PSK Modem. M-FSK Modem. QAM Modem. TDM. FDM.