EC8395 COMMUNICATION ENGINEERING SYLLABUS **L T P C 3 0 0 3**

UNIT I ANALOG MODULATION 9

Amplitude Modulation – AM, DSBSC, SSBSC, VSB – PSD, modulators and demodulators – Angle modulation – PM and FM – PSD, modulators and demodulators – Super heterodyne receivers

UNITII PULSE MODULATION 9

Low pass sampling theorem – Quantization – PAM – Line coding – PCM, DPCM, DM, and ADPCM and ADM, Channel Vocoder - Time Division Multiplexing, Frequency Division Multiplexing

UNIT III DIGITAL MODULATION AND TRANSMISSION 9

Phase shift keying – BPSK, DPSK, QPSK – Principles of M-ary signaling M-ary PSK & QAM – Comparison, ISI – Pulse shaping – Duo binary encoding – Cosine filters – Eye pattern, equalizers

UNIT IV INFORMATION THEORY AND CODING 9

Measure of information – Entropy – Source coding theorem – Shannon–Fano coding, Huffman Coding, LZ Coding – Channel capacity – Shannon-Hartley law – Shannon's limit – Error control codes – Cyclic codes, Syndrome calculation – Convolution Coding, Sequential and Viterbi decoding

UNIT V SPREAD SPECTRUM AND MULTIPLE ACCESS 9

PN sequences – properties – m-sequence – DSSS – Processing gain, Jamming – FHSS – Synchronisation and tracking – Multiple Access – FDMA, TDMA, CDMA,

TEXT BOOKS:

1. H Taub, D L Schilling, G Saha, —Principles of Communication Systems‖ 3/e, TMH 2007

2. S. Haykin —Digital Communications‖ John Wiley 2005

REFERENCES:

1. B.P.Lathi, —Modern Digital and Analog Communication Systems‖, 3rd edition, Oxford University Press, 2007

2. H P Hsu, Schaum Outline Series – —Analog and Digital Communications‖ TMH 2006

3. B.Sklar, Digital Communications Fundamentals and Applications‖ 2/e Pearson Education 2007.