

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING
SYLLABUS FOR B.E. VI-SEMESTER

INTRODUCTION TO DIGITAL COMMUNICATION

(for other Departments)

Instruction : 1 Hr /week	SEE Marks : 50	Course Code :OE630EC
Credits : 1	CIE Marks : 30	Duration of SEE : 2 Hrs

Course Objective	Course Outcomes
1. To understand various digital modulation schemes and perform source coding and error control coding on the information.	At the end of the course, students will be able to: 1. Comprehend the need for digital communications 2. Analyze digital modulation schemes 3. Apply Source coding techniques. 4. Implement various error control techniques

UNIT - I

Introduction:

Elements of Digital Communication System, Comparison of Digital and Analog Communication Systems. Quantization, PCM. Source coding: Shannon - Fano algorithm and Huffman coding. Digital modulation schemes - ASK, FSK, PSK, DPSK and MSK and their comparison.

UNIT - II

Error control coding

Linear Block Codes (LBC): description of LBC, generation, Syndrome and error detection, minimum distance of a block code, error correcting and error detecting capabilities.

Convolution codes: description, encoding and decoding

Suggested Reading:

1. Singh, R,P and Sapre, S.D., " Communication Systems ", TMH,2007.
2. A. Bruce Carlson and Paul B. Crilly, " Communication Systems", 5/e, 2011.