SUBJECT NO-EE41013, SUBJECT NAME- DIGITAL SIGNAL PROCESSING

LTP- 3-1-0,CRD- 4

SYLLABUS :-

Short introduction -Discrete time systems and signals; Z-transform, Difference equation.Filter design by transformation - Impulse and step Invariant, Bi-linear Z-transform, matched Z-transform.Signal Model-AR, MA, ARMA, State Variable model, Lattice structures.FIR filter design, Frequency windowing technique, Equi ripple Chebyshev and Butterworth criterion.Filter performance and design in presence of noise, FIR filters banks-subband decomposition.Inverse filtering-Deconvolution and equalization techniques-Weiner, Linear prediction etc., Signal reconstruction.Time frequency Analysis - STFT, WT, DSP hardware - Design methodologies,Popular architectures and overview of programming Application notes.Filter implementation: Topology, Scaling, Coefficient quantization, Signal quantization, Sensitivity analysis.