

Lesson Plan

Name of Faculty : Dr. suman Rani, Assistant Professor of ECE
Discipline : ECE
Semester : 5th
Subject : DSP lab
Lesson Plan Duration : 15 weeks
Work Load (Lecture/Practical) per week (in hours): Practical-02 hours

Week	Practical		Actual covered
	Practical Day	Topics/ Programs	
1 st	1	To represent basic signals (Unit step, unit impulse, ramp, exponential, sine and cosine) in MATLAB.	
2 nd	2	2. To generate triangular, saw tooth and square waveform using MATLAB program. 3. To develop program for discrete convolution.	
3 rd	3	4. To develop program for discrete correlation. 5. To develop program for sampling of a continuous time signal with different sampling frequency in order to study aliasing effect.	
4 th	4	6. To develop a program to determine the impulse response of a system for which input sequences and output sequences are given. 7. To design Butterworth IIR filters (low-pass, high pass, band-pass, band-stop).	
5 th	5	8. To design digital FIR filters using windows technique. (Rectangular window, Blackman window, Hamming window, Hanning window. 9. To plot the magnitude and phase spectrum of a signal using DFT.	
6 th	6	Internal 1st viva – voce	
7 th		1st Minor Test	
8 th	7	10. To perform interpolation and decimation using MATLAB. 11. To develop program for computing linear and circular convolution.	
9 th	8	12. To develop program for finding magnitude and phase response of LTI system described by system function $H(z)$.	
10 th	9	13. To generate DTMF signals using MATLAB.	
11 th	10	14. To develop program for stability test using MATLAB	
12 th	11	. 15. To develop a program for computing inverse Z-transform of a rational transfer function.	
13 th	12	16. To develop a program for computing parallel realization values of IIR digital filter.	
14 th		2nd Minor Test	
15 th	13	17. To develop a program for computing cascade realization values of IIR digital filter.	