

# LESSON PLAN

Period	Date (Tentative)	Topic	Unit No.	Teaching Methodology	Remarks	Correction Upon
SIGNALS AND SYSTEMS LESSON PLAN						
Period	Date(tentative)	Topic	Unit no	Teaching methodology		
UNIT – I: SIGNAL ANALYSIS						
1	26 – 06 - 2017	Introduction to signals and systems	I	Class room teaching		
2	27 – 06 - 2017	Classification of signals				
3	30 – 06 - 2017					
4	03 – 07 - 2017	Exponential and sinusoidal signals, and properties of elementary signals				
5	07 – 07 - 2017	Analogy between vectors and signals				
6	08 – 07 - 2017	Orthogonal signal space, signal approximation using orthogonal functions				
7	10 – 07 - 2017	Mean square error, closed or complete set of orthogonal functions, and orthogonality in complex functions				
8	11 – 07 - 2017	Classification of systems				
9	14 – 07 - 2017	Problems				
10	15 – 07 - 2017					
11	17 – 07 - 2017					
12	18 – 07 - 2017					
13	21 – 07 - 2017					
UNIT – II: FOURIER SERIES & FOURIER TRANSFORM						
14	22 – 07 - 2017	Representation of Fourier series, continuous time periodic signals, trigonometric and exponential Fourier series, Complex Fourier spectrum	II	Class room teaching		
15	24 – 07 - 2017	properties of Fourier series, Dirichlet's conditions.				
16	25 – 07 - 2017					
17	28 – 07 - 2017	Problems				
18	29 – 07 - 2017					
19	31 – 07 - 2017	Deriving Fourier transform from Fourier series, Fourier transform of arbitrary signals and standard signals, properties of Fourier transforms, Fourier transform of periodic signals				
20	01 – 08 - 2017					
21	04 – 08 - 2017					
22	05 – 08 - 2017					
23	07 – 08 - 2017	Problems				
24	08 – 08 - 2017					

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Period	Date(tentative)	Topic	Unit no.	Teaching methodology
UNIT – III: CONTINUOUS TIME LTI SYSTEMS				
25	11 – 08 - 2017	Linear time variant and invariant systems, Representation of continuous time signals in terms of impulses.	III	Class room teaching
26	12 – 08 - 2017	Unit impulse response and the convolution integral representations of LTI system, transfer function of a LTI system		
27	14 – 08 - 2017			
28	18 – 08 - 2017	Filter characteristics of linear systems. Distortion less transmission through a system, signal bandwidth, system bandwidth, ideal LPF, HPF and BPF characteristics		
29	19 – 08 - 2017			
I MID				
30	28 – 08 - 2017	Causality and Poly-Wiener criterion for physical realization	III	Class room teaching
31	29 – 08 - 2017	Problems		
32	01 – 09 - 2017			
33	02 – 09 - 2017			
UNIT – IV: CONVOLUTION, CORRELATION AND SAMPLING OF SIGNALS				
34	04 – 09 - 2017	Concept of convolution and correlation in time domain and frequency domain	IV	Class room teaching
35	05 – 09 - 2017	Cross correlation and auto correlation		
36	08 – 09 - 2017	Energy and power density spectrum		
37	09 – 09 - 2017	Properties of correlation.		
38	11 – 09 - 2017	Problems		
39	12 – 09 - 2017			
40	13 – 09 - 2017	Sampling theorem, Impulse sampling, Natural and Flat top sampling		
41	14 – 09 - 2017			
42	15 – 09 - 2017	Reconstruction of signal from its samples, effect of under sampling – Aliasing		
43	19 – 09 - 2017			
44	20 – 09 - 2017	Problems		
45	21 – 09 - 2017			
UNIT – V: LAPLACE AND Z – TRANSFORMS				
46	22 – 09 - 2017	Review of Laplace transforms, Laplace Transforms of typical signals, properties of LT, relation between LT and FT of a signal. Region of convergence (ROC) and constraints on ROC. Inverse Laplace transforms	V	Class room teaching
47	26 – 09 - 2017			
48	27 – 09 - 2017			
49	03 – 10 - 2017	Problems		
50	04 – 10 - 2017			
51	05 – 10 - 2017			
52	06 – 10 - 2017	Introduction to z-transform and its properties, Inverse Z-Transform, simple mathematical problems and ROC		
53	10 – 10 - 2017			
54	11 – 10 - 2017	Problems		
55	12 – 10 - 2017			
II MID				

21/5/17