

LESSON PLAN-2021-22 (SUMMER-2022)

DISCIPLINE- ETC	Semester- 6th	Name of teaching faculty-ER. RAKHAL CHANDRA SAHOO
SUBJECT- DSP	No of days/ per week class allotted-5	SEM From date- 14/03/2022 No of weeks-16
Week	Class day	Theory Topics
3RD	14.03.2022	Introduction of Signals, Systems & Signal processing
	15.03.2022	Basics of Signals, Systems & Signal processing- basic element of a digital signal processing system -Compare the advantages of digital signal processing over analog signal processing.
	17.03.2022	Classify signals - Multi channel & Multi-dimensional signals, Continuous time versus Discrete -time Signal. -Continuous valued versus Discrete -valued signals
	18.03.2022	Concept of frequency in continuous time & discrete time signals, Continuous-time sinusoidal signals-Discrete-time sinusoidal signals-Harmonically related complex exponential.
4TH	21.03.2022	Analog to Digital & Digital to Analog conversion & explain the following. a. Sampling of Analog signal, b. The sampling theorem
	22.03.2022	Coding of quantized sample. e. Digital to analog conversion. f. Analysis of digital systems signals vs. discrete time signals systems.
	24.03.2022	DISCRETE TIME SIGNALS & SYSTEMS. 2.1 Concept of Discrete time signals
	25.03.2022	Elementary Discrete time signals. 2.1.2 Classification Discrete time signal. 2.1.3 Simple manipulation of discrete time signal
	26.03.2022	Discrete time system. 2.2.1 Input-output of system. 2.2.2 Block diagram of discrete- time systems
5TH	28.03.2022	Classify discrete time system. 2.2.4 Inter connection of discrete -time system.
	31.03.2022	do Classify discrete time System. 2.2.4 Inter Connection
1ST	02.04.2022	Discrete time time-invariant system. 2.3.1 Different techniques for the Analysis of linear system.
2ND	04.04.2022	do Discrete time-invariant system. 2.3.1 Different
	05.04.2022	Resolution of a discrete time signal in to impulse. 2.3.3 Response of LTI system to arbitrary inputs using convolution sum
	07.04.2022	do Resolution of a discrete time signal in to impulse.
	08.04.2022	Convolution & interconnection of LTI system - properties. 2.3.5 Study systems with finite duration and infinite duration impulse response.
	09.04.2022	do Convolution & interconnection of LTI system - properties
3RD	11.04.2022	Discrete time system described by difference equation. 2.4.1 Recursive & non-recursive discrete time system.
	12.04.2022	do Discrete time system described by difference
	16.04.2022	Determine the impulse response of linear time invariant recursive system. 2.4.3 Correlation of Discrete Time signals
4TH	18.04.2022	do Determine the impulse response of linear time
	19.04.2022	THE Z-TRANSFORM & ITS APPLICATION TO THE ANALYSIS OF LTI SYSTEM. 3.1 Z-transform & its application to LTI system. 3.1.1 Direct Z-transform.
	21.04.2022	do THE Z-TRANSFORM & ITS APPLICATION TO THE

	22.04.2022	Inverse Z-transform. 3.2 Various properties of Z-transform.
	23.04.2022	do Inverse Z-transform. 3.2 Various properties of Z-
5TH	25.04.2022	Rational Z-transform. 3.3.1 Poles & zeros. 3.3.2 Pole location time domain behaviour for casual signals.
	26.04.2022	System function of a linear time invariant system.
	28.04.2022	Discuss inverse Z-transform. 3.4.1 Inverse Z-transform by partial fraction expansion
	29.04.2022	do Discuss inverse Z-transform. 3.4.1. Inverse Z-
	30.04.2022	Inverse Z-transform by contour Integration
1ST	02.05.2022	do Inverse Z-transform by Countour Integration
	05.05.2022	DISCUSS FOURIER TRANSFORM: ITS APPLICATIONS PROPERTIES. 4.1 Concept of discrete Fourier transform
	06.05.2022	do DISCUSS FOURIER TRANSFORM: ITS APPLICATION
	07.05.2022	Frequency domain sampling and reconstruction of discrete time signals.
2ND	09.05.2022	do Frequency domain sampling and reconstruction of
	10.05.2022	Discrete Time Fourier transformation(DTFT)
	12.05.2022	do Discrete time fourier transformation (DTFT)
	13.05.2022	Discrete Fourier transformation (DFT).
	14.05.2022	Compute DFT as a linear transformation.
3RD	16.05.2022	do Computer DFT as a linear transformation
	17.05.2022	do Computer DET as a linear transformation.
	19.05.2022	Relate DFT to other transforms
	20.05.2022	do Related DFT to Other. transforms
	21.05.2022	Property of the DFT.
4TH	23.05.2022	Multiplication of two DFT & circular convolution
	24.05.2022	do Multiplication of two DFT & circular convolution
	26.05.2022	do Multiplication of two DFT & circular convolution
	27.05.2022	FAST FOURIER TRANSFORM ALGORITHM & DIGITAL FILTERS
	28.05.2022	Compute DFT & FFT algorithm
5TH	31.05.2022	do Compute DFT & FFT algorithm
1ST	02.06.2022	Direct computation of DFT
	03.06.2022	do Direct computation of DFT
	04.06.2022	Divide and Conquer Approach to computation of DFT
2ND	06.06.2022	do Divide and Conquer Approach to computation of DFT
	07.06.2022	Radix-2 algorithm. (Small Problems)
	09.06.2022	Application of FFT algorithms
	10.06.2022	Introduction to digital filters.(FIR Filters)& General considerations
	11.06.2022	Introduction to DSP architecture
3RD	13.06.2022	familiarisation of different types of processor

KP
HOD H.O.D
ETC Engineering
S.V.S.E.T., Madanpur

PRINCIPAL
Swami Vivekananda School of Engg. & Tech.
Madanpur, BBSR