LESSON PLAN, SESSION-SUMMER-2023
SWAMI VIVEKANANDA SCHOOL OF ENGG & TECH, BBSR

DISCIPLINE- E.T.C. ENGG.	SEMESTER- 6th	NAME OF THE FACULTY - ER. SRIDHARA KUMAR RATH / *Rakha Chandra Sahoo*		
SUBJECT - DSP	NO. OF CLASSES ALOTTED/WEEK - 5	SEMESTER FROM - 14/02/2023 NO. OF WEEKS -16		

WEEK	DATE	TOPICS COVERED
3RD	14.02.2023	Introduction of Signals, Systems & Signal processing
	15.02.2023	Basics of Signals, Systems & Signal processing- basic element of a digital signal processing system
	16.02.2023	Compare the advantages of digital signal processing over analog signal processing
	17.02.2023	Classify signals - Multi channel& Multi-dimensional signals⌐ Continuous time verses Discrete -times Signal. -Continuous valued verses Discrete -valued signals
4TH	20.02.2023	Concept of frequency in continuous time & discrete time signals⌐ Continuous-time sinusoidal signals-Discrete-time sinusoidal signals-Harmonically related complex exponential
	21.02.2023	Analog to Digital & Digital to Analog conversion
	22.02.2023	Sampling of Analog signal, The sampling theorem, Quantization of continuous amplitude signals
	23.02.2023	Coding of quantized sample, Digital to analog conversion, Analysis of digital systems signals vs. discrete time signals systems.
	24.02.2023	Coding of quantized sample, Digital to analog conversion, Analysis of digital systems signals vs. discrete time signals systems.
5TH	27.02.2023	Class Test
	28.02.2023	DISCRETE TIME SIGNALS & SYSTEMS
1ST	01.03.2023	Revision
	02.03.2023	Concept of Discrete time signals
	03.03.2023	Elementary Discrete time signals, Classification Discrete time signal, Simple manipulation of discrete time signal
2ND	06.03.2023	Elementary Discrete time signals, Classification Discrete time signal, Simple manipulation of discrete time signal
	07.03.2023	Discrete time system
	09.03.2023	Input-output of system, Block diagram of discrete- time systems, Classify discrete time system
	10.03.2023	Inter connection of discrete -time system
3RD	13.03.2023	Discrete time time-invariant system, Different techniques for the Analysis of linear system
	14.03.2023	Revision
	15.03.2023	Resolution of a discrete time signal in to impulse, Response of LTI system to arbitrary inputs using convolution sum
	16.03.2023	Resolution of a discrete time signal in to impulse, Response of LTI system to arbitrary inputs using convolution sum
	17.03.2023	Convolution & interconnection of LTI system - properties
4TH	20.03.2023	Study systems with finite duration and infinite duration impulse response
	21.03.2023	Discrete time system described by difference equation, Recursive & non-recursive discrete time system
	22.03.2023	Discrete time system described by difference equation, Recursive & non-recursive discrete time system
	23.03.2023	Determine the impulse response of linear time invariant recursive system
	24.03.2023	Determine the impulse response of linear time invariant recursive system
5TH	27.03.2023	Correlation of Discrete Time signals
	28.03.2023	THE Z-TRANSFORM & ITS APPLICATION TO THE ANALYSIS OF LTI SYSTEM
	29.03.2023	Z-transform & its application to LTI system
	30.03.2023	Direct Z-transform, Inverse Z-transform
	31.03.2023	Direct Z-transform, Inverse Z-transform

	03.04.2023	Revision
	04.04.2023	Various properties of Z-transform
	05.04.2023	Various properties of Z-transform
2ND	06.04.2023	Rational Z-transform, Poles & zeros, Pole location time domain behaviour for casual signals
	07.04.2023	Rational Z-transform, Poles & zeros, Pole location time domain behaviour for casual signals
	10.04.2023	System function of a linear time invariant system, Discuss inverse Z-transform
	11.04.2023	Inverse Z-transform by partial fraction expansion, Inverse Z-transform by contour Integration
3RD	12.04.2023	Inverse Z-transform by partial fraction expansion, Inverse Z-transform by contour Integration
	13.04.2023	Inverse Z-transform by partial fraction expansion, Inverse Z-transform by contour Integration
	14.04.2023	DISCUSS FOURIER TRANSFORM: ITS APPLICATIONS PROPERTIES
	17.04.2023	Concept of discrete Fourier transform
	18.04.2023	Concept of discrete Fourier transform
4TH	19.04.2023	Frequency domain sampling and reconstruction of discrete time signals
	20.04.2023	Frequency domain sampling and reconstruction of discrete time signals
	21.04.2023	Discrete Time Fourier transformation(DTFT)
	24.04.2023	Discrete Time Fourier transformation(DTFT)
	25.04.2023	Discrete Fourier transformation (DFT)
5TH	26.04.2023	Compute DFT as a linear transformation
	27.04.2023	Compute DFT as a linear transformation
	28.04.2023	Relate DFT to other transforms
	01.05.2023	Property of the DFT
	02.05.2023	Multiplication of two DFT & circular convolution
1ST	03.05.2023	Multiplication of two DFT & circular convolution
	04.05.2023	FAST FOURIER TRANSFORM ALGORITHM & DIGITAL FILTERS
	05.05.2023	Compute DFT & FFT algorithm
	08.05.2023	Compute DFT & FFT algorithm
	09.05.2023	Direct computation of DFT
2ND	10.05.2023	Divide and Conquer Approach to computation of DFT
	11.05.2023	Divide and Conquer Approach to computation of DFT
	12.05.2023	Radix-2 algorithm. (Small Problems)
	15.05.2023	Revision
	16.05.2023	Application of FFT algorithms
3RD	17.05.2023	Introduction to digital filters.(FIR Filters)& General considerations
	18.05.2023	Introduction to DSP architecture
	19.05.2023	familiarisation of different types of processor
4TH	22.05.2023	Doubt Clearing Class
	23.05.2023	Doubt Clearing Class

HOD   DEAN(ACADEMICS)   PRINCIPAL