

Lesson Plan of the 5th semester for session 2020-21 (July- Dec)

Name of the faculty: Ms. Neha Malik
Designation: Assistant Professor
Discipline: Computer Science and Engg.
Semester: 5th
Subject: **DIP(PEC-CSE-315G)**
Lesson Plan duration: 15 weeks
Work Load per week in hours: Lectures- 03

Week	Lecture day	Topic (Including Assignment/Test)
UNIT – I		
1	1	Introduction to Image Processing
	2	Digital Image representation
	3	Steps/stages in Digital image processing
2	4	Components of Digital Image Processing
	5	Sampling & Quantization
	6	Image Acquisition, Color Image
3	7	Revision of Unit 1
		UNIT II
	8	Introduction to Image Transformations
4	9	Intensity transform functions
	10	Histogram processing
	11	Histogram Equalization
	12	Spatial Filtering

5	13	Fourier Transform and properties
	14	Frequency domain filters
	15	Color models, Pseudo coloring
6	16	Color transforms, Basics of Wavelet transforms
	17	Image degradation process
	18	Image restoration process
7.	19	Noise models
	20	Noise Filters, Degradation function
	21	Inverse filtering
8.	22	Homomorphism filtering
	23	Revision of Unit 2
	24	Class test of Unit 2
UNIT III		
9.	25	Introduction to image compressions
	26	Coding redundancy
	27	Interpixel redundancy
11.	28	Psychovisual redundancy
	29	Huffman coding
	30	Arithmetic coding
12.	31	Lossless compression techniques
	32	JPEG Compression
	33	Revision of Unit 3

UNIT – IV		
13.	34	Introduction to image segmentation and representation
	35	Point, Line detection
	36	Edge detection
14.	37	Threshold, Edge and boundary linking
	38	Hough transforms
	39	Region based segmentation
15.	40	Boundary representation
	41	Boundary descriptors
	42	Revision of Unit 4
16.	43	Class test for Unit 1
	44	Class test for Unit 3
	45	Class test for Unit 4