

# LESSON PLAN

Period	Date	Topic	Unit No.	Teaching Methodology	Remarks	Corrective Action Upon Review
		Digital Image Processing Introduction	1	CR		
1	14-07-15	Basics of DIP, (non-destructive) (Kakinada)				
2	16-07-15	Steps in DIP,				
3	16-07-15	Components of an		4		
4	17-07-15	Image processing system, subject		4		
5	21-07-15	Image fundamentals				
		Elements of Visual perception, light and electro-magnetic			I.C.D. Bager	
6	23-07-15	Spectrum, Imaging sensor and regulation		CR		
7	23-07-15	Color, Image sampling and quantization		4		
8	24-07-15	Some basic relations ship between picture		4		
		<b>STUDENT ATTENDANCE REGISTER</b>				
		used in DIP				
9	28-07-15	Image transformations: need for image transformations, Spatial frequency in image processing, Introduction to Fourier transforms, Discrete Fourier transform, Fast Fourier transform and its algorithm		CR		
10	30-07-15	Properties of Fourier transform - Sampling theorem, Parseval's theorem, Discrete cosine transform, etc.		4		
11	30-07-15	Other image transformations: Walsh transform, Hadamard transform, Slant transform				
12	31-07-15	Haar transform, Slant transform		4		

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Period	Date (Tentative)	Topic	Unit No.	Teaching Methodology	Remarks	Corrective Action Upon Review
		SVD and KL Transformations or Hotelling transformation				
		Intensity Transformations and Spatial Filtering	11			
13	04-08-18	Recall ground, Some basic intensity trans.		CR		
14	06-08-18	Association functions, Histogram processing,		LCD Projector		
15	06-08-18	fundamentals of spatial filtering, Smoothing		4		
16	07-08-18	spatial filters, Sharpening Spatial filters		CR		
17	12-08-18	combining spatial enhancement methods		CR		
18	13-08-18	using fuzzy techniques to intensity transformations and spatial filtering.		CR		
		filtering in the frequency domain: Drawn concepts	11			
19	13-08-18	Sampling and the fourier transform of		CR		
20	14-08-18	sampled functions, the discrete fourier transform		CR		
21	18-08-18	spaces (DFT) of one variable, Extension to functions of two variables, some properties of the 2-D Discrete fourier transform. Or basic of filtering in the frequency domain, Image smoothing using low pass		CR		
22	20-08-18	domain filters, selective filtering, complementation.		CR		
23	21-08-18					
24	21-08-18					



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		Image restoration and reconstruction	12	Ch.		
25	25-08-15	A model of the image degradation / restoration				
26	27-08-15	process, noise models, Restoration in the frequency domain		y		
27	27-08-15	Some of noise only - spatial filtering, Periodic noise reduction by frequency domain		y		
28	28-08-15	filtering, linear, position-invariant degradation. Estimation of the degradation function		y		
29	01-09-15	Inverse filtering, minimum mean square error (Wiener) filtering, constrained least squares filtering, geometric mean filter		y		
30	03-09-15	Image reconstruction from projections		y		
31	03-09-15	Color image processing: color fundamentals	13			
32	04-09-15	color models, fixed color image processing, Basic of full color image processing, color transformations		y		
33	15-09-15	Smoothing and sharpening, image segmentation		y		
34	17-09-15	Color models, fixed color image processing, Basic of full color image processing, color transformations		y		
35	17-09-15	Color image processing, Basic of full color image processing, color transformations		y		
36	18-09-15	Color image processing, Basic of full color image processing, color transformations		y		
37	22-09-15	Color image processing, Basic of full color image processing, color transformations		y		
38	24-09-15	Color image processing, Basic of full color image processing, color transformations		y		
39	24-09-15	Color image processing, Basic of full color image processing, color transformations		y		

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Period	Date (Tentative)	Topic	Unit No.	Teaching Methodology	Remarks	Corrective Action Upon Review
		<u>Wavelets and multiresolution processing:</u>	<u>VI</u>			
40	25-9-18	Image pyramids, sub-band coding & Haar		CE		
41	29-9-18	transform, multiresolution expansion		9		
42	01-10-18	Wavelet transform				
43	04-10-18	in one domain, 2D		LED project		
44	06-10-18	fast wavelet transform, wavelet transform in two domains, wavelet packets.		CE		
45	08-10-18	Image Compression: fundamentals, various compression methods		CE		
46	09-10-18	coding techniques		CE		
47	13-10-18	Digital Image Watermarking		200 Proj.		
48	15-10-18					
50	15-10-18					
		<u>Morphological Image processing:</u>	<u>VII</u>			
51	16-10-18	proximity, erosion and dilation, opening and closing. The hit-miss transform		CE		
52	20-10-18			9		
53	22-10-18			9		
54	22-10-18			9		
55	23-10-18			9		
56	27-10-18	Grey-Scale morphology.		9		
		<u>Image Segmentation</u>	<u>VIII</u>			
57	29-10-18	fundamentals, point, line, edge detection		CE		
58	29-10-18			9		
59	30-10-18	thresholding, region-based segmentation		9		
60	02-11-18			9		
61	05-11-18	Segmentation using morphological water		9		
62	05-11-18			9		
63	06-11-18	Shed. The use of motion in segmentation.		9		
64						