Lecture Plan for Digital Image Processing (OE-024)

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Section :   EC-1

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Units	Lecture	Topic to Cover	Reference Book
Unit-1		**Introduction to Digital Image Processing**	
	Lecture-1	Fourier Transform	2
	Lecture-2	Z- Transform	2
	Lecture-3	Multidimensional sequence	1,2
	Lecture-4	Image digitizing	1,3
	Lecture-5	Image processing software	1
	Lecture-6	Histograms	1.3
	Lecture-7	Point operations	1
	Lecture-8	Surprise Test-1	
Unit-2		**Introduction to algebraic operations**	
	Lecture-1	Convolution	1
	Lecture-2	Filtering	1
	Lecture-3	Optimal filter design	1,2
	Lecture-4	Data processing, computing	1
	Lecture-5	Truncation	1
	Lecture-6	Optics and system analysis	1
	Lecture-7	Diffraction limited optical systems	1
	Lecture-8	Optical abbreviations , Quiz-1	1
Unit-3		**Applications**	
	Lecture-1	Image restoration	1.3
	Lecture-2	Image restoration	1,3
	Lecture-3	Approaches and models	1,3
	Lecture-4	Image segmentation	1,3
	Lecture-5	Image segmentation	1,3
	Lecture-6	Image segmentation	1,3
	Lecture-7	Segmented image structure	1
	Lecture-8	Surprise Test-II	
Unit-4		**Measurement**	
	Lecture-1	Measurement and classification of size	1
	Lecture-2	Shape measurement	1
	Lecture-3	Feature selection,	1
	Lecture-4	Classification	1
	Lecture-5	Three dimensional image processing	1
	Lecture-6	Three dimensional image processing	1

	Lecture-7	Optics sectioning	1
	Lecture-8	Quiz-II	
Unit-5		**Application in Medical Field**	
	Lecture-1	CAT	1
	Lecture-2	Steriometric ranging	1
	Lecture-3	Image Display	1
	Lecture-4	Stereoscopic Image Display	1
	Lecture-5	Shaded surface display	1
	Lecture-6	Revision	
	Lecture-7(Extra)	Revision	
	Lecture-8(Extra)	Revision	

Reference:

1. Kenneth R. Castleman/ Digital Image Processing/PHI
2. A.K. Jain/Image Processing/Pearson Education 2003
3. GonzaleZ R.C. & P. Wint/ Digital Image Processing/ Addision Wesley.