

Year & Sem:	Course Code: EC3501	Course Name: Digital Image Processing	No. of Credits: 4	L	T&PS	P
				2	2	0
Unit-I: Digital image fundamentals: image digitization, sampling and quantization, image resolution,colour perception & processing						
Unit-II: image processing: pixel based transformation, geometric transformation, local processing (edge detection, subpixed location estimation) restoration(degradation, inverse fitting & Wiener filtering).						
Unit-III: binary image processing: thresholding, runlength encoding, distance transforms, medial axis transforms, morphological operations, region segmentation & representation:						
Unit-IV: split & merge algorithm, region growing, image filtering:histogram modification, linear and Gaussian filters.						
Unit-V: contours: digital curves, polyline splitting,Hop_Along algorithm, Conic & Splines Hough transform, Fourier description, textures: satisticalsyntactic and model based methods,						
Unit-VI: image transforms: Fourier, Hadamard, discrete cosine,wavelets and other orthogonal transforms, compression image (predictive compression methods, vector quantization, hierarchical & progressive methods, JPEG & MPEG), .						
References/Text Books: 1. 2.						
Lecture Plan: Unit-I & -II syllabus for MID-I, Unit-III & -IV syllabus for MID-II and Unit-V & -VI syllabus for MID-III examinations.						
Video Lectures (Web Links): 1. 2.						
Study Materials (Web Links): 1. 2.						
Problems & Solutions (Web Links): 1. 2.						
Assignments (Web Links): 1. 2.						