CS 561: IMAGE PROCESSING LAB (0-0-2: 1)

<u>Suggested Laboratory Assignments:</u>

- Implement and understand image resizing, image type conversion, line profile.
- Implement of image addition, image complement, logical operations (like NOT, OR, AND, XOR) on images, geometric operations.
- Understand histogram operations, contrast stretching, gamma correction on images.
- Observe various type of noise effect on images.
- Implement different spatial filtering (smoothing & sharpening) techniques.
- Understand and implement Fast Fourier Transformation (FFT) and frequency domain filtering on images.
- Understand image restoration and implement the Weiner filter on images.
- Understand image segmentation using different edge detection, thresholding techniques.
- Understand and implement different morphological operation and their applications.
- Understand colour model s and manipulate colour images.

Text Books

1. Gonzalez R. C. and Woods R. E, "Digital Image Processing", Pearson Prentice Hall, 3rd edition 2008.
2. Jain A. K., "Fundamentals of Digital Image Processing", PHI, 1994.