

## GRAPHICAL PROGRAMMING (SKILL ORIENTED COURSE-II)

Course Code:22EC11S3

L	T	P	C
<b>0</b>	<b>1</b>	<b>2</b>	<b>2</b>

Course Outcomes: At the end of the course the student will be able to

- CO1:** Illustrate the usage of various loops.(L3)
- CO2:** Analyze Fourier transform technique.(L4)
- CO3:** Analyze the statistical properties of the signal.(L4)
- CO4:** Analyze and implement various filters.(L4)
- CO5:** Apply various image processing techniques on images.(L3)

### List of Experiments:

1. Generate sine, square, triangle and sawtooth signals.
2. To perform sum of N numbers and factorial of a given number using For and While loops.
3. To solve linear equations.
4. To perform matrix operations: transpose of a matrix and inverse of a matrix.
5. To demonstrate the convolution and correlation of two continuous-time signals.
6. To demonstrate the convolution and correlation of two discrete-time signals.
7. Design and implement a low pass filter.
8. Design and implement a high pass filter.
9. Design and implement band pass filter.
10. Find the Fourier transform of the given signal and plot its magnitude and phase spectrum.
11. Perform power spectrum of a given multitone signal.
12. Design Frequency Division Multiplexing technique.
13. Find the first order and second order statistics for different signals.
14. Perform basic image processing operations like complimenting an image, and contrast stretching.
15. Apply image smoothing operations for denoising of an image.
16. Apply different edge detection operators on an image.

Note: Any **TWELVE** of the experiments are to be conducted.

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