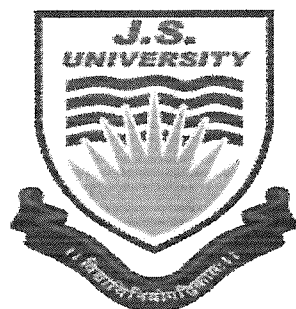


J. S. University, Shikohabad

Established by UP Govt. Act No. 07 of 2015

Recognized by U.G.C. under section 2 (f) of Act-1956




Value Added Course

VAC-109

(SKILLS IN COMPUTER GRAPHICS)

Faculty of Physics

2020-21

	J.S. University, Shikohabad Faculty of Physics	Value Added Course
		AY: 2020-21

(SKILLS IN COMPUTER GRAPHICS)

Learning Objectives:


- To learn the basics of computers.
- To understand the basic principles of computer graphics.
- To elaborate drawing methods.
- To familiarize graphical input techniques.

Duration: 30 Hours. (Theory and Practical)

Perquisites:

Assessment Criteria/ Award of certification:

Participants who secured 90% attendance and secured 80% marks in final quiz shall be awarded the completion of certificate


	J.S. University, Shikohabad Faculty of Physics	Value Added Course
		AY: 2020-21

Course Outcomes: -

Maximum Exposure has to be given on Practical Oriented

By the end of the course, the students will be able to

- 1) Interpret the basics of computer graphics.
- 2) Expert to handle graphics devices.
- 3) Explain the transformation and windowing.
- 4) Expert to expert in handling different graphical techniques.

	J.S. University, Shikohabad Faculty of Physics	Value Added Course
		AY: 2020-21

Sr.No	Content	Duration (30 Hrs)
1	Basics of Computer Graphics	06
2	GRAPHICS DEVICES	06
3	C Graphics Basics	06
4	TWO DIMENSIONAL TRANSFORMATIONS and CLIPPING AND WINDOWING	06
5	GRAPHICAL INPUT TECHNIQUES	06

SYLLABUS OUTLINE

1. Module-1

BASICS OF COMPUTER GRAPHICS

Introduction, What is Computer Graphics? Area of Computer Graphics, Design, and Drawing, Animation Multimedia applications, Simulation, How are pictures stored and displayed, Difficulties for displaying pictures.

2. Module-2

GRAPHICS DEVICES

Cathode Ray Tube, Quality of Phosphors, CRTs for Color Display, Beam Penetration CRT, The Shadow - Mask CRT, Direct View Storage Tube, Tablets, light Pen, Three Dimensional Devices.

3. Module-3

C Graphics Basics

Graphics programming, initializing the graphics, C Graphical functions, simple programs.

SIMPLE LINE DRAWING METHODS: Point Plotting Techniques, Qualities of good line drawing algorithms, The Digital Differential Analyzer (DDA), Bresenham's Algorithm, and Generation of Circles.

4. **Module-2**

TWO DIMENSIONAL TRANSFORMATIONS and CLIPPING AND WINDOWING

Wave Analyzer, Spectrum Analyzer. Frequency Counters: Simple Frequency Counter; Measurement errors; extending frequency range of counters. Transducers: Types, Strain Gages, Displacement Transducers.

5. **Module-5**

GRAPHICAL INPUT TECHNIQUES:

Graphical Input Techniques, Positioning Techniques, Positional Constraints, Rubber band Techniques.

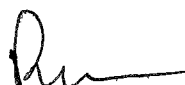
References: -

1. Principles of Interactive Computer Graphics – By Newman & Sproull.
2. C Graphics & Projects – By B M Havaladar.
3. Computer Graphics – By Hearn & Baker.
4. Computer Graphics for Scientists and Engineers – By Asthana and Sinha.


(Name of Faculty)

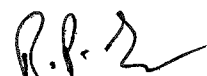
Course Coordinator

Dr. Sanjeev
Kumar


(Name of Faculty) Dean

Academics

Dr. Akhil


(Name of Faculty)

Director/Princip
e/Dean of
Faculty/Depart
ment

Dr. B.P.S.
Chauhan