

# Bhoj Reddy Engineering College for Women: Hyderabad

## Department of Information Technology

Lesson plan of faculty member for the academic year 2020–21

Class: III B Tech

Branch-Section: IT-A

Semester: I

Subject: Computer Graphics

Lectures per week: 3

Lecture Number	Topics to be covered	Date (s)
<b>UNIT-I: Introduction, Output Primitives</b>		
1	Introduction to Computer Graphics	1 September 2020
2	Application areas of Computer Graphics, Overview of graphics systems	3 September 2020
3	Video-display devices, Raster scan systems	5 September 2020
4	Random scan systems	8 September 2020
5	Graphics monitors, Work stations, Input devices	10 September 2020
6	Output primitives, Points and lines, DDA line drawing algorithm	12 September 2020
7	Bresenham's line drawing algorithm	15 September 2020
8	Mid-point circle algorithm, Mid-point ellipse algorithm	17 September 2020
9	Filled-area primitives, Scan line polygon fill algorithm, Flood-fill algorithm	19 September 2020
<b>UNIT-II: 2-D Geometric Transformations, Viewing</b>		
10	2-D Geometrical transformations, Rotation	22 September 2020
11	Reflection Shear transformations	24 September 2020
12	Matrix representations and homogenous coordinates	26 September 2020
13	Composite transforms, Transformations between coordinate systems	29 September 2020
14	2-D Viewing, The viewing pipeline	1 October 2020
15	Window to view-port coordinate transformation	3 October 2020
16	Viewing functions	6 October 2020
17	Cohen-Sutherland line clipping algorithm	8 October 2020
18	Cyrus-Beck line clipping algorithm	10 October 2020
19	Sutherland-Hodgeman polygon clipping algorithm	13 October 2020
<b>UNIT-III: 3-D Object Representation</b>		
20	Polygon surfaces	15 October 2020
21	Quadric surfaces	27 October 2020
22	Spline representation	29 October 2020
23	Hermite curve	31 October 2020
24	Bezier curve	10 November 2020
25	B-Spline curve, Bezier surface	12 November 2020
26	B-Spline surface	17 November 2020
27	Basic Illumination models	19 November 2020
28	Polygon rendering methods	21 November 2020
<b>UNIT-IV: 3-D Geometric Representaion</b>		
29	3-D Geometric transformations Rotation	24 November 2020
30	Reflection and Shear transformations	26 November 2020
31	Composite transformations	28 November 2020
32	3-D viewing – Viewing pipeline	1 December 2020
33	Clipping	3 December 2020
34	Viewing coordinates	5 December 2020
35	View volume	8 December 2020
36	General projection transforms	10 December 2020
<b>UNIT-V: Computer Animation</b>		
37	Design of animation sequence	12 December 2020

38	General computer animation functions	15 December 2020
39	Raster animation	17 December 2020
40	Computer animation languages	19 December 2020
41	Key frame systems Motion specifications	22 December 2020
42	Visible surface detection methods: Classification	24 December 2020
43	Back-face detection	29 December 2020
44	Depth buffer method	31 December 2020
45	BSP-tree methods , Area sub-division method	2 January 2021

**Text books:**

1. Computer Graphics C Version” Donald Hearn and M.Pauline Baker,Pearson Education
2. Computer Graphics,Steven Harrington,TMH

Name and signature of the faculty: G Jyothi ---

Name and signature of Head of the Department: C Murugamani ----