Subject: Computer Graphics & Multimedia   Branch: MCA
Semester: 3rd   Faculty Name: Sucheta Panda

Module	Topic	No. Of Classes
I	1. Introduction and advantages of CG, application, operation	2
	2. Video display device, CRT design and working raster scan	1
	3. Random scan display and raster scan display	1
	4. Graphics input output devices , graphics packages	1
	5. DDA Algorithm with example and derivation	1
	6. Bresenham 's line drawing algorithm with example,derivation	1
	7. Mid-point circle algorithm with examples and derivation	1
	8. Bresenham 's circle algorithm, derivation and examples	1
	9. Scan conversion of solids	1
	10. Filled area primitives	1
	11. Polygon filling, soft fill and seed fill algorithm	1
	12. Scan Conversion of a Character	1
II	1. Aliasing and Antialiasing	1
	2. Halftoning, Thresholding and Dithering methods	1
	3. 2-D Transformations, Translation, rotation and scaling	2
	4. Composite 2D Transformation	1
	5. Reflection about origin, about y-axis etc.	1
	6. Shear about x-axis, y-axis, 2D viewing	1
	7. Cohen-Sutherland line clipping algorithm with example	1
	8. Sutherland-Hodgmen polygon clipping algo. with example	2
	9. Splines, spline curve, B-spline	1
	10. Equation of Cubic Bezier Curves with examples	1
	11. 3-D Translation, rotation	1
	12. Scaling, reflection, projection	1
	13. Different categories of Projection	1
III	1. Orthographic Projection, Cavalier Projection	1
	2. Back Face Detection Methods	1
	3. Z-buffer Algorithm and A-buffer Algorithm	1
	4. Explanation of Z-buffer algorithm its advantages and disadvantages	1
	5. Depth sorting algorithm	1
	6. Painter 's algorithm	1
IV	1. Illumination model with example	1
	2. Gouroud shading with explanation	1
	3. Phong Shading and Fast Phong Shading	1
	4. Examples of Phong Shading and Fast Phong Shading	1
	5. Animation and Types of Animation	1
	6. Half Toning and Dithering Techniques	1
	7. Surface rendering methods	1
	8. Introduction to Graphics Library (GL)	1
	9. Implementation of above using Graphics Library (GL)	1
	Total Number of Classes	44