**PG.GOVT COLLEGE FOR GIRLS, SECTOR-42, CHANDIGARH**

**Teaching Plan Session Odd Semester**

**(2018-19)**

**Class: M. Sc.(IT)3rd sem Name of the Teacher: Sheenam**

**Subject: Computer Graphics Period :3rd,6th**

**Paper : MS – 39 Room No :(1-6)Lab1 (2) 101**

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| **S. No** | **Date From** | | **Date Upto** | **Topics to be covered** |
| Week 1 | **(For ongoing classes)** | | | Introduction to Computer Graphics, Display Devices, Display Processors, Character Generation, |
| July 24, 2018 | | July 28, 2018 |
| Week 2 | July 30, 2018 | August 4, 2018 | | Interactive graphical techniques: Positioning, (Elastic or Rubber Band lines, Inking, zooming, panning) |
| Week 3 | August 6, 2018 | August 11, 2018 | | Line Drawing algorithms-Direct method, DDA and Bresenham’s |
| Week 4 | August 13, 2018 | August 18, 2018 | | homogeneous coordinate system; Basic Transformations- Translation, Rotation |
| Week 5 | August 20, 2018 | August 25, 2018 | | Scaling, Reflection, Shear, composite transformation like- Rotation about an Arbitrary Point |
| Week 6 | August 27, 2018 | September 1, 2018 | | Circle drawing algorithm- 2-point, 4-point, trigonometric method, 8-point, |
| Week 7 | September 3, 2018 | September 8, 2018 | | Bresenham method, Bresenham Midpoint method |
| Week 8 | September 10, 2018 | September 15, 2018 | | display subroutines, plotting and geometric transformations, Viewing; Color; Lighting, Animation. |
| Week 9 | September 17, 2018 | September 22, 2018 | | Reflection through an Arbitrary Line transformation of points and unit square. |
| Week 10 | September 24, 2018 | September 29, 2018 | | Concept of Animation, Saving, Loading and Printing graphics images from/to disk. |
| Week 11 | October 1, 2018 | October 8, 2018 | | Open GL using C/C++: Geometric Primitives and Attributes; |
| **MID SEMESTER EXAMINATION (October 11, 2018 to October 17, 2018)** | | | | |
| Week 12 | October 20, 2018 | October 27, 2018 | | Basic Graphical functions; Mouse Programming, Graphic Languages: Primitives (Constants, actions, operators, variables), |
| Week 13 | October 29, 2018 | November 3, 2018 | | Clipping: Point clipping Line clipping algorithms: Cohen-Sutherland and Liang-Barsky, Polygon Clipping; Window to viewport coordinate transformation.Animated algorithms for sorting, Towers of Hanoi. |
| Week 14 | November 5, 2018 | November 10, 2018 | | Three Dimensional Display Methods, Parallel Projection, Perspective Projection; Translation, Rotation, Scaling, Composite Transformation; |
| Week 15 | November 12, 2018 | November 17, 2018 | | Hidden line and surface elimination-Z-buffer, back face, scan line, depth sorting. |
| Week 16 | November 19, 2018 | November 22, 2018 | | Representation of Space Curves, Cubic Splines, Bezier Curves, B-spline Curves, B-spline Curve Fit, B-spline Curve Subdivision |
| Week 17 | November 26, 2018 | December 1, 2018 | | Parametric Cubic Curves, Quadric Surfaces. Bezier Surfaces |