**Post Graduate Govt. College for Girls, Sector-42, Chandigarh**

**Teaching Plan (Odd Semester) Session (2019-2020)**

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

**Subject: Computer Graphics Period:2nd**

**Paper: : MS – 39 Room No: 101(1-4)**

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| **S. No** | **Dates** | **Topics to be Covered** |
| Week 1 | 23-07-2019 to 27-07-2019 | Introduction to Computer Graphics, Display Devices, Display Processors, Character Generation, |
| Week 2 | 29-07-2019 to 03-08-2019 | Line Drawing algorithms-Direct method, DDA and Bresenham’s |
| Week 3 | 05-08-2019 to 10-08-2019 | Interactive graphical techniques: Positioning, (Elastic or Rubber Band lines, Inking, zooming, panning) |
| Week 4 | 13-08-2019 to 17-08-2019 | homogeneous coordinate system; Basic Transformations- Translation, Rotation |
| Week 5 | 19-08-2019 to 24-08-2019 | Scaling, Reflection, Shear, composite transformation like- Rotation about an Arbitrary Point |
| Week 6 | 26-08-2019 to 31-08-2019 | Circle drawing algorithm- 2-point, 4-point, trigonometric method, 8-point, |
| Week 7 | 02-09-2019 to 07-09-2019 | Bresenham method, Bresenham Midpoint method |
| Week 8 | 09-09-2019 to 14-09-2019 | display subroutines, plotting and geometric transformations, Viewing; Color; Lighting, Animation. |
| Week 9 | 16-09-2019 to 21-09-2019 | Reflection through an Arbitrary Line transformation of points and unit square. |
| Week 10 | 23-09-2019 to 28-09-2019  (Youth Festival 24-09-2019 to 27-09-2019) | Clipping: Point clipping Line clipping |
| Week 11 | 30-09-2019 to 05-10-2019 | algorithms: Cohen-Sutherland and Liang-Barsky, Polygon Clipping |
| Mid Semester Exams | | |
| Week 12 | 16-10-2019 to 19-10-2019 | Basic Graphical functions; Mouse Programming, Graphic Languages: Primitives (Constants, actions, operators, variables), |
| Week 13 | 21-10-2019 to 26-10-2019 | Window to viewport coordinate transformation.Animated algorithms for sorting, Towers of Hanoi. |
| Week 14 | 29-10-2019 to 02-11-2019 | Three Dimensional Display Methods, Parallel Projection, Perspective Projection; Translation, Rotation, Scaling, Composite Transformation; |
| Week 15 | 04-11-2019 to 09-11-2019 | Hidden line and surface elimination-Z-buffer, back face, scan line, depth sorting. |
| Week 16 | 11-11-2019 to 16-11-2019 | Representation of Space Curves, Cubic Splines, Bezier Curves, B-spline Curves, B-spline Curve Fit, B-spline Curve Subdivision ,Parametric Cubic Curves, Quadric Surfaces. Bezier Surfaces |
| Week 17 | 18-11-2019 to 23-11-2019 | Concept of Animation, Saving, Loading and Printing graphics images from/to disk. |
| Week 18 | 25-11-2019 to 30-11-2019 | Open GL using C/C++: Geometric Primitives and Attributes; |