

### **3. Computer Graphics (CS-116)**

**(3-0-2)**

Input devices, Video display devices, Area filling algorithms with irregular boundaries, Cohen-Sutherland and Cyrus-Beck line clipping algorithms, Basic 2-dimensional and 3-dimensional geometric transformations, Homogeneous coordinate system, Parallel projection, Isometric projection and its construction, Perspective projection, Hidden surface elimination algorithms, Basic illumination models, Gouraud and Phong surface rendering models, Representation of curves and surfaces.

#### **References:**

1. J.D. Foley, A. Van Dam, J.F. Hughes and S.K. Feiner, Computer Graphics: Principles and Practice, Second Edition, Addison Wesley
2. D. Hearn and P. M. Baker, Computer Graphics, Second Edition, Prentice Hall of India.
3. Rogers, Procedural Elements of Computer Graphics, Second Edition, TMG
4. Rogers and Adams, Mathematical Elements of Computer Graphics, Second Edition, TMG