

## Course Content & Grade

Branch	Subject Title	Subject Code	Grade for End Sem		CGPA at the end of every even semester
B.TECH. Common	Engineering Graphics	BT -1005	Theory	Practical	5.0
			Min.“D”	Min.“D”	

### Unit I

**Scales:** Representative factor, plain scales, diagonal scales, scale of chords.

**Conic sections:** Construction of ellipse, parabola, hyperbola by different methods; Normal and Tangent.

**Special Curves:** Cycloid, Epi-cycloid, Hypo-cycloid, Involute, Archimedean and logarithmic spirals.

### Unit II

**Projection:** Types of projection, orthographic projection, first and third angle projection, **Projection of points and lines**, Line inclined to one plane, inclined with both the plane, True Length and True Inclination, Traces of straight lines.

### Unit III

**Projection of planes and solids:** Projection of Planes like circle and polygons in different positions; Projection of polyhedrons like prisms, pyramids and solids of revolutions like cylinder, cones in different positions.

### Unit IV

**Section of Solids:** Section of right solids by normal and inclined planes; Intersection of cylinders.

**Development of Surfaces:** Parallel line and radial - line method for right solids.

### Unit V

**Isometric Projections:** Isometric scale, Isometric axes, Isometric Projection from orthographic drawing.

**Computer Aided Drafting (CAD):** Introduction, Btnefit, software's basic commands of drafting entities like line, circle, polygon, polyhedron, cylinders; transformations and editing commands like move, rotate, mirror, array; solution of projection problems on CAD.

### References

1. Visvesvaraya Tech. University; APremier on Computer Aided Engg drawing; VTU BTlgaum
2. Bhatt N.D.; Engineering Drawing, Charotar
3. Venugopal K.; Engineering Graphics; New Age
4. John KC; Engg. Graphics for Degree; PHI.
5. Gill P.S.; Engineering Drawing; kataria
6. Jeyopooan T.; Engineering drawing & Graphics Using AutoCAD; Vikas
7. Agrawal and Agrawal; Engineering Drawing; TMH
8. Shah MB and Rana BC; Engg.drawing; Pearson Education
9. Luzadder WJ and Duff JM; Fundamental of Engg Drawing; PHI
10. Jolhe DA; Engg. Drawing an Introduction; TMH
11. Narayana K.L.; Engineering Drawing; Scitech

### List of Practical:

Sketching and drawing of geometries and projections based on above syllabus

**Term work:** A min. of 30 hand drawn sketches (on size A4 graphic sketch Book) plus 5

CAD-printouts on size A4 sheets plus 10 sheets of size A2 or 6 sheets of size A1, (50% marks to BT allotted for this record + 25% marks for attendance +25%marks for Teachers Assessment)

**Practical Marks to BT allotted based on written test and viva.**

**Note:** To cover above syllabus, each Institute must have CAD software and a computer lab (6 to 12 hrs/month/student).