

## DEPARTMENT OF MECHANICAL ENGINEERING

**Name of the Lab : CAD Laboratory**

**Name of the course : Computer Aided Machine Drawing**

**Subject Code : ME8381 (II Year - III Semester)**

**Regulations: R17**

### List of experiments recommended as per Anna University

#### DRAWING STANDARDS & FITS AND TOLERANCES

Code of practice for Engineering Drawing, BIS specifications – Welding symbols, riveted joints, keys, fasteners – Reference to hand book for the selection of standard components like bolts, nuts, screws, keys etc. - Limits, Fits – Tolerancing of individual dimensions – Specification of Fits – Preparation of production drawings and reading of part and assembly drawings, basic principles of geometric dimensioning & tolerancing.

#### INTRODUCTION TO 2D DRAFTING

- Drawing, Editing, Dimensioning, Layering, Hatching, Block, Array, Detailing, Detailed drawing.
- Bearings - Bush bearing, Plummer block
- Valves – Safety and non-return valves.

#### 3D GEOMETRIC MODELLING AND ASSEMBLY

Sketcher - Datum planes – Protrusion – Holes - Part modelling – Extrusion – Revolve – Sweep – Loft – Blend – Fillet - Pattern – Chamfer - Round - Mirror – Section – Assembly

- Couplings – Flange, Universal, Oldham's, Muff, Gear couplings
- Joints – Knuckle, Gib & cotter, strap, sleeve & cotter joints
- Engine parts – Piston, connecting rod, cross-head (vertical and horizontal), stuffing box, multi-plate clutch
- Miscellaneous machine components – Screw jack, machine vice, tail stock, chuck, vane and gear pump

Estd - 2001