

I YEAR M. TECH (MACHINE DESIGN) FIRST SEMESTER

17MEMD1L2

COMPUTER AIDED MODELLING LAB

Credits 2

Lecture: 3 periods/week

Internal assessment: 25 marks

Tutorial: - -

Semester end examination: 50 marks

COURSE OBJECTIVES:

- Students will learn theory and practice related to solid modeling, assembly modeling, drafting and parametric modeling.
- Use basic and advanced features of current modeling software
- Understand how CAD technology can be leveraged in the design process

COURSE OUTCOME:

Upon successful completion of this course, the student will be able to

1. Model a part or assembly of parts using Computer-Aided Design software.
2. Use parametric modeling techniques to reflect engineering requirements.
3. Use motion and interference checking to ensure that parts will not interfere throughout their complete range of motion.
4. Communicate effectively the geometry and intent of design features.

LIST OF EXPERIMENTS

1. Introduction of 3D Modeling software
2. Part modeling of following models
 - a) Screw Jack
 - b) Universal Joint
 - c) Plummer Block
1. Creation of 3D assembly model of following machine elements using 3D modeling software
 - a) Screw Jack
 - b) Universal Joint
 - c) Plummer Block
4. Creation of drawing views of assembly models using 3D modeling software
 - a) Screw Jack
 - b) Universal Joint
 - c) Plummer Block