

**III B.TECH -I SEMESTER
CAD/CAM LAB**

Course Code: ME5L3

Credits: 2

Lecture: ---

Internal assessment: 25 marks

Lab Practice: 3 periods/week

Semester end examination: 50 marks

COURSE OBJECTIVES:

COURSE OUTCOMES:

Upon completion of this course the students will be able to

- Execute steps required for modeling 3D objects by using protrusion, cut, sweep, extrude commands
- Convert 3D solid models into 2D drawing-different views, sections
- Use isometric views and dimensioning of part models
- Machine simple components on CNC machines
- Use CAM software to generate NC code

CAD LAB

LIST OF EXPERIMENTS

Performing following experiments using Pro-E software

1. Solid modeling of screw with thread
2. Solid modeling of bolt and nut
3. Solid modeling of connecting rod
4. Solid model of screw jack body or casting, screw and nut
5. Solid models of screw jack bodies' Cup, Washer, Set Screw and Tommy Bar
6. Assembly of screw jack parts and constructions of 2D drawings

CAM LAB

(A) Machining of simple components on NC lathe and Mill by transferring NC :

7. Rectangular contouring on XL MILL
8. Arbitrary contouring on XL MILL
9. Step turning on XLTURN
10. Taper Turning on XLTURN

(B) Development of NC code using CAM package:

11. Rectangular and Arbitrary contouring NC code generation using ESPRIT
12. Step turning and Taper Turning NC code generation using ESPRIT