4/4 B.Tech. EIGHTH SEMESTER

ME8L1   **CAD/CAM LABORATORY**   **Credits: 2**

Lecture:- -   **Internal assessment: 25marks**
Lab Practice: 3 periods/week   **Semester end examination: 50 marks**

Objectives:

3. Develop 2D and 3D models in modeling software

4. Perform transformations on 2D and 3D models

5. Understand how to control CNC machines

6. Learn how to program CNC machines

Learning outcomes:

At the end of course the students will have the ability to:

1. Employ Modeling software to develop 2D and 3D models

2. Execute transformations on 2D and 3D models

3. Perform the Assemble operations using Modeling software

4. Control CNC machine manufacturing applications

Pre-Requisites:

Cad /Cam, CAMDP

CAD LAB:
 PART MODELING using Pro-E**:**
   1. Generation of various 3D Models through Protrusion, revolve, shell sweep.
   2. Creation of various features. Study of parent child relation.
   3. Feature based and Boolean based modeling surface and Assembly Modeling.
   4. Study of various standard Translators. Design simple components.

CAM LAB:
   A) Machining of simple components on CNC Mill and lathe

   CNC MILLING:
   1. Rectangular Contouring

2. Arbitrary Contouring

CNC LATHE:
3. Step turning
4. Taper turning

B) Development of NC code using CAM packages.

SIMULATION & NC CODE GENERATION: Simulation using ESPRIT CAM

5. Rectangular Contouring
6. Arbitrary Contouring
7. Step turning
8. Taper turning