GOVERNMENT POLYTECHNIC, MALKANGIRI
DEPARTMENT OF MECHANICAL ENGINEERING

LESSON PLAN

Discipline: Mechanical Engineering	Semester: 5TH	Name of the Teaching Faculty: BIBHASH MANDAL	
Subject: CAD/CAM LAB	No. of days/week class allotted 4	Semester From date:14.07.2025 No. of Week: 15	To date:15.11.2025

Course Outcomes	1. To understand the fundamentals and use of CAD. 2. To conceptualize drafting and modelling in CAD. 3. To interpret the various features in the menu of solid modelling package. 4. To synthesize various parts or components in an assembly. 5. To prepare CNC programmes for various jobs

Week	Class Day	Theory/Practical Topics
1st	1st	Part modelling, Datum plane, Datum plane; constraint; dimensioning; extrude; revolve
	2nd	sweep; protrusion; extrusion; rib; shell; hole; round; chamfer; copy; mirror; assembly; align; orient.
2nd	1st	sweep; protrusion; extrusion; rib; shell; hole; round; chamfer; copy; mirror; assembly; align; orient.
	2nd	2D Drawings of Rectangle, circle, polygon and its dimensioning
3rd	1st	2D Drawings of Rectangle, circle, polygon and its dimensioning
	2nd	3D Drawings of 1.Gib and cutter joint
4th	1st	2.Screw Jack;
	2nd	Connecting Rod;
5th	1st	Bearing Block.
	2nd	Print the orthographic view from the above assembled 3Ddrawing
6th	1st	Print the orthographic view from the above assembled 3Ddrawing
	2nd	Study of CNC lathe, milling;
7th	1st	Study of international codes; G-Codes and M –Codes
	2nd	Study of international codes; G-Codes and M –Codes
8th	1st	Study of international codes; G-Codes and M –Codes
	2nd	Format –Dimensioning methods
9th	1st	Format –Dimensioning methods
	2nd	Programme writing –Turning Simulator-Milling simulator IS practice-commands menus
10th	1st	Programme writing –Turning Simulator-Milling simulator IS practice-commands menus
	2nd	Programme writing –Turning Simulator-Milling simulator IS practice-commands menus
11th	1st	Editing the programme in the CNC MACHINES
	2nd	Editing the programme in the CNC MACHINES
12th	1st	Execute the programme in the CNC machines
	2nd	Execute the programme in the CNC machines
13th	1st	Print the programme and make the component in the CNC machine
	2nd	Print the programme and make the component in the CNC machine
14th	1st	Using canned cycle-create a part programme for thread cutting, grooving and produce component in the CNC Turning Machine
	2nd	Using canned cycle-create a part programme for thread cutting, grooving and produce component in the CNC Turning Machine
15th	1st	Using Linear interpolation and Circular Interpolation-Create a part programme for grooving and produce component in the CNC Milling Machine
	2nd	Using Linear interpolation and Circular Interpolation-Create a part programme for grooving and produce component in the CNC Milling Machine

Bibhash mandal.
Signature of Faculty

Signature of HOD/

Signature of Academic Coordinator

Signature of Principal