



**GOVERNMENT POLYTECHNIC,
NABARANGPUR DEPARTMENT OF MECHANICAL
ENGINEERING**

Discipline: MECHANICAL ENGG	Semester: 5th	Name of the Teaching Faculty: Er. LAXMAN GOLARI
Subject: CAD/CAM LAB	No. of days/ per week class allotted: 04	Semester From date: 16.08.2024 To Date: 08.11.2024 No. of Weeks: 12
COURSE OUTCOMES	CO1. To understand the fundamentals and use of CAD. CO2. To conceptualize drafting and modelling in CAD. CO3. To interpret the various features in the menu of solid modelling package. CO4. To synthesize various parts or components in an assembly. CO5. To prepare CNC programmes for various jobs.	
WEEK	CLASS DAY	Theory/Practical Topics
1st	1	1. PART – INTRODUCTION Part modelling, Datum plane, Datum plane; constraint; dimensioning.
	2	Extrude; revolve; sweep; protrusion; extrusion.
	3	Rib; shell; hole; round; chamfer
	4	Rib; shell; hole; round; chamfer (Contd...)
2nd	1	Copy; mirror; assembly; align; orient.
	2	2D DRAWINGS Rectangle, circle, polygon and its dimensioning.
	3	Rectangle, circle, polygon and its dimensioning (Contd...)
	4	Rectangle, circle, polygon and its dimensioning (Contd...)
3rd	1	3D DRAWING Gib and cutter joint
	2	Gib and cutter joint (Contd...)
	3	Gib and cutter joint (Contd...)
	4	Screw Jack, Screw Jack (Contd...)
4th	1	Connecting Rod
	2	Bearing Block
	3	PART-BCNC Programming and Machining Study of CNC lathe, milling
	4	. Study of international codes; G-Codes and M-Codes
5th	1	Study of international codes; G-Codes and M-Codes
	2	Format – Dimensioning methods.
	3	Programme writing – Turning Simulator – Milling simulator IS practice-commands
	4	Programme writing – Turning Simulator – Milling simulator IS practice-commands menus (Contd...)
6th	1	Editing the programme in the CNC MACHINES.
	2	Editing the programme in the CNC MACHINES.
	3	. Editing the programme in the CNC MACHINES.
	4	Execute the programme in the CNC machines.
7th	1	Execute the programme in the CNC machines.

8 th	2	Executetheprogrammeinthe 'NC' machines.
	3	Executetheprogrammeinthe 'NC' machines.
	4	Programmewriting-Turning Simulator-Millingsimulator ISpractice-commands menus.
	1	Programmewriting-Turning Simulator-Millingsimulator ISpractice-commands menus(Contd...)

9 th	2	ExecutetheprogrammeintheCNC machines.
	3	PrinttheprogrammeandmakethecomponentintheCNC machine.
	4	PrinttheprogrammeandmakethecomponentintheCNC machine
	1	PrinttheprogrammeandmakethecomponentintheCNC machine.
10 th	2	PrinttheprogrammeandmakethecomponentintheCNC machine.
	3	Using cannedcycle-createapartprogramme forthreadcutting,groovingand producecomponentintheCNC TurningMachine.
	4	Using cannedcycle-createapartprogramme forthreadcutting,groovingand producecomponentintheCNC TurningMachine.
	1	
11 th	2	Using cannedcycle-createapartprogramme forthreadcutting,groovingand producecomponentintheCNC TurningMachine.
	3	PrinttheprogrammeandmakethecomponentintheCNC machine(Contd...)
	4	Using cannedcycle-createapartprogramme forthreadcutting,groovingand producecomponentintheCNC TurningMachine(Contd...)
	1	Using cannedcycle-createapartprogramme forthreadcutting,groovingand producecomponentintheCNC TurningMachine(Contd...)
12 th	2	Using cannedcycle-createapartprogramme forthreadcutting,groovingand producecomponentintheCNC TurningMachine(Contd...)
	3	PrinttheprogrammeandmakethecomponentintheCNC machine(Contd...)
	4	PrinttheprogrammeandmakethecomponentintheCNC machine(Contd...)
	1	UsingLinearinterpolationandCircularInterpolation-Createapartprogramme for groovingandproducecomponentintheCNCMillingMachine
	2	Usingcannedcycle- createapartprogramme forthreadcutting,groovingandproducecomponentintheCNCTu rningMachine(Contd...)
	3	Using cannedcycle-createapartprogramme forthreadcutting,groovingand producecomponentintheCNCTurningMachine
	4	UsingLinearinterpolationandCircularInterpolation-Createapartprogramme for groovingandproducecomponentintheCNCMillingMachine

Laxman Gopal
16.08.24
Sign.Of Faculty concerned

Academic coordinator
21/08/24

Sign.Of HOD

Principal, GNABARANGPUR
21.09.24