

GOVT. POLYTECHNIC, NAYAGARH
LESSON PLAN
4th SEMESTER MECHANICAL ENGINEERING (2023-24)
SUBJECT- MANUFACTURING TECHNOLOGY (TH.2)

(w.e.f -16/01/2024)

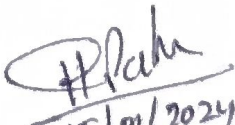
Name of Faculty: Himanshu Patra , Lect. (GF)

TOTAL PERIODS-60
THEORY-4P/WEEK

Sl No.	week	Day	Topics to be covered
1	1 st	1 st day	Tool Materials: Composition of various tool materials
		2 nd day	Physical properties& uses of such tool materials
		3 rd day	Cutting tools
		4 th day	Cutting action of various hand tools such as Chisel and Hack saw blade
Sl No.	week	Day	Topics to be covered
2	2 nd	1 st day	Dies and reamer
		2 nd day	Turning tool geometry and purpose of tool angle
		3 rd day	Machining process parameters (Speed, feed and depth of cut)
		4 th day	Coolants and lubricants in machining and purpose
Sl No.	week	Day	Topics to be covered
3	3 rd	1 st day	Lathe Machine
		2 nd day	Construction and working of lathe and CNC lathe
		3 rd day	Major components of a lathe and their function
		4 th day	Operations carried out in a lathe Turning, thread cutting, taper turning
Sl No.	week	Day	Topics to be covered
4	4 th	1 st day	Internal machining, parting off, facing, knurling
		2 nd day	Safety measures during machining
		3 rd day	Capstan lathe: Difference with respect to engine lathe
		4 th day	Major components and their function
Sl No.	week	Day	Topics to be covered
5	5 th	1 st day	Define multiple tool holders
		2 nd day	Turret Lathe: Difference with respect to capstan lathe
		3 rd day	Major components and their function
		4 th day	Draw the tooling layout for preparation of a hexagonal bolt & bush
Sl No.	week	Day	Topics to be covered
6	6 th	1 st day	Shaper: Potential application areas of a shaper machine
		2 nd day	Major components and their function
		3 rd day	Explain the automatic table feed mechanism
		4 th day	Explain the construction & working of tool head
Sl No.	week	Day	Topics to be covered

7	7 th	1 st day	Explain the quick return mechanism through sketch
		2 nd day	State the specification of a shaping machine.
		3 rd day	Planing Machine : Application area of a planer and its difference with respect to shaper
		4 th day	Major components and their functions
Sl No.	week	Day	Topics to be covered
8	8 th	1 st day	The table drive mechanism
		2 nd day	Working of tool and tool support
		3 rd day	Clamping of work through sketch.
		4 th day	Assignment and doubt clearance
Sl No.	week	Day	Topics to be covered
9	9 th	1 st day	Milling Machine: Types of milling machine and operations performed by them and also same for CNC milling machine
		2 nd day	Explain work holding attachment
		3 rd day	Construction & working of simple dividing head, universal dividing head
		4 th day	Procedure of simple and compound indexing
Sl No.	week	Day	Topics to be covered
10	10 th	1 st day	Illustration of different indexing methods
		2 nd day	Slotter: Major components and their function
		3 rd day	Construction and working of slotter machine
		4 th day	Tools used in slotter
Sl No.	week	Day	Topics to be covered
11	11 th	1 st day	Grinding: Significance of grinding operations
		2 nd day	Manufacturing of grinding wheels
		3 rd day	Criteria for selecting of grinding wheels and Specification of grinding wheels
		4 th day	Cylindrical Grinder
Sl No.	week	Day	Topics to be covered

12	12 th	1 st day	Surface Grinder
		2 nd day	Centreless Grinder
		3 rd day	Internal Machining operations
		4 th day	Classification of drilling machines
Sl No.	week	Day	Topics to be covered
13	13 th	1 st day	Bench drilling machine
		2 nd day	Pillar drilling machine
		3 rd day	Radial drilling machine
		4 th day	Boring: Basic Principle of Boring
Sl No.	week	Day	Topics to be covered
14	14 th	1 st day	Different between Boring and drilling
		2 nd day	Broaching
		3 rd day	Types of Broaching(pull type, push type)
		4 th day	Advantages of Broaching and applications
Sl No.	week	Day	Topics to be covered
15	15 th	1 st day	Definition of Surface finish
		2 nd day	Description of lapping& explain their specific cutting.
		3 rd day	Assignment evaluation
		4 th day	Doubt clearance and Revision


 15/01/2024
 Lect. (Gr)