

GOVT. POLYTECHNIC, NAYAGARH
LESSON PLAN
4th SEMESTER MECHANICAL ENGINEERING (2022-23)
SUBJECT- MANUFACTURING TECHNOLOGY (TH.2)

(w.e.f 14/02/2023)
Name of Faculty: Himanshu Patra , Lect. (PTGF)

TOTAL PERIODS-60
THEORY-4P/WEEK

Sl No.	week	Day	Topics to be covered	TOTAL PERIODS-60
				THEORY-4P/WEEK
1	1 st	1 st day	Composition of various tool materials	
		2 nd day	Physical properties & uses of such tool materials	
		3 rd day	Introduction to Cutting tool	
		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	Cutting action of various hand tools such as dies and reamer	
		2 nd day	Cutting Tool geometry and purpose of tool angle	
		3 rd day	Cutting Tool Nomenclature	
		4 th day	Machining process parameters	
Sl No.	week	Day	Topics to be covered	
3	3 rd	1 st day	Types of Coolant and lubricant in machining purposes	
		2 nd day	Construction and working of lathe machine	
		3 rd day	Major components of a lathe and their function	
		4 th day	Turning, Thread cutting and Taper turning operation	
Sl No.	week	Day	Topics to be covered	
4	4 th	1 st day	Internal machining, parting off, facing and knurling operation	
		2 nd day	Safety measures during machining	
		3 rd day	Major components and function of Capstan Lathe	
		4 th day	Major components and function of Turret Lathe Lathe	
Sl No.	week	Day	Topics to be covered	
5	5 th	1 st day	Draw the tooling lay out for preparation of a hexagonal bolt & bush	
		2 nd day	Potential application areas of a shaper machine	
		3 rd day	Major components and function of Shaper machine	
		4 th day	Automatic table feed mechanism of shaper	
Sl No.	week	Day	Topics to be covered	
6	6 th	1 st day	Construction & Working of tool head	
		2 nd day	Quick return mechanism through sketch	
		3 rd day	State the specification of a shaping machine.	
		4 th day	Application area of a Planner and its difference with respect to shaper	
Sl No.	week	Day	Topics to be covered	

7	7th	1 st day	Major components and functions of Planner
		2 nd day	Table drive mechanism of Planner
		3 rd day	Working of tool and tool support
		4 th day	Clamping of work through sketch.
Sl No.	week	Day	Topics to be covered
8	8th	1 st day	Types of milling machine and operations performed by them
		2 nd day	Parts of Column and Knee type Milling Machine
		3 rd day	Construction & Working of simple dividing head and Universal dividing head
		4 th day	Procedure of simple Indexing operation
Sl No.	week	Day	Topics to be covered
9	9 th	1 st day	Procedure of Compound Indexing operation
		2 nd day	Numericals on Indexing operation
		3 rd day	Illustration of different indexing methods
		4 th day	Doubt clearance
Sl No.	week	Day	Topics to be covered
10	10 th	1 st day	Major components and their function of Slotter machine Tool
		2 nd day	Construction and working of slotter machine
		3 rd day	Tools used in Slotter machine
		4 th day	Uses of slotter machine tool
Sl No.	week	Day	Topics to be covered
11	11 th	1 st day	Introduction to Grinding machine and Significance of grinding operations
		2 nd day	Manufacturing of grinding wheels
		3 rd day	Criteria for selecting of grinding wheels
		4 th day	Specification of grinding wheels with example
Sl No.	week	Day	Topics to be covered

12	12 th	1 st day	Working of Cylindrical Grinder machine
		2 nd day	Working of Surface Grinder machine
		3 rd day	Working of Centreless Grinder machine
		4 th day	Introduction to Internal Machining operations
Sl No.	week	Day	Topics to be covered
13	13 th	1 st day	Classification of drilling machines
		2 nd day	Working of Bench drilling machine and Pillar drilling machine
		3 rd day	Working of Radial drilling machine
		4 th day	Basic Principle of Boring and Different between Boring and Drilling
Sl No.	week	Day	Topics to be covered
14	14 th	1 st day	Types of Broaching(pull type and push type)
		2 nd day	Advantages of Broaching and applications
		3 rd day	Application and Limitation of Broaching
		4 th day	Introduction to Surface finishing Operation
Sl No.	week	Day	Topics to be covered
15	15 th	1 st day	Definition of Surface finish
		2 nd day	Description of Lapping & their specific cutting
		3 rd day	Difference between Lapping and Honing surface finish operation
		4 th day	Doubt clearance and Revision

~~H. Fletcher
13/02/2023~~
Lec 1 (PTHE) Mechanical