

LESSON PLAN-4 th SEMESTER (2022-2023)				
SUBJECT - MANUFACTURING TECHNOLOGY (TH-2)				
Name of the Faculty- <u>Ex. M.D. NDR</u>				
MONTH	CHAPTER /TOPIC	COURSE TO BE COVERED	CLASSES REQUIRED	REMARKS (IF ANY)
JANUARY	Chapter-1	Tool Materials:	4	
	1.1	Composition of various tool materials	2	
	1.1	Physical properties& uses of such tool materials.	2	
FEB.	Chapter -2	Cutting Tools:	6	
	2.1	Cutting action of various and tools such as Chisel, hacksaw blade, dies and reamer	2	
	2.2	Turning tool geometry and purpose of tool angle	3	
	2.3	Machining process parameters (Speed, feed and depth of cut)	1	
	2.4	Coolants and lubricants in machining and purpose	1	
MARCH	Chapter-3	Lathe Machine:	8	
	3.1	Construction and working of lathe and CNC lathe - Major components of a lathe and their function - Operations carried out in a lathe(Turning, thread cutting, taper turning, internal machining, parting off, facing, knurling) - Safety measures during machining	2	
	3.2	Capstan lathe - Difference with respect to engine lathe - Major components and their function - Define multiple tool holders	2	
	3.3	Turret Lathe - Difference with respect to capstan lathe - Major components and their function	2	
	3.4	Draw the tooling layout for preparation of a hexagonal bolt &bush	2	
MARCH	Chapter-4	Shaper:	6	
	4.1	Potential application areas of a shaper machine	1	

	4.2	Major components and their function	1	
	4.3	Explain the automatic feed mechanism	1	
	4.4	Explain the construction & working of tool head	1	
	4.5	Explain the quick return mechanism through sketch	1	
	4.6	State the specification of a shaping machine.	1	
	Chapter-5	Planing Machine:	6	
	5.1	Application area of a planer and its difference with respect to shaper	1	
	5.2	Major components and their functions	1	
	5.3	The table drive mechanism	2	
	5.4	Working of tool and tool support	1	
	5.5	Clamping of work through sketch.	1	
APRIL	Chapter-6	Milling Machine:	08	
	6.1	Types of milling machine and operations performed by them and also same for CNC milling machine	1	
	6.2	Explain work holding attachment	1	
	6.3	Construction & working of simple dividing head, universal dividing head	2	
	6.4	Procedure of simple and compound indexing	2	
	6.5	Illustration of different indexing methods	2	
	Chapter-7	Slotter	6	
	7.1	Major components and their function	2	
	7.2	Construction and working of slotter machine	2	
	7.3	Tools used in slotter	2	
	Chapter-8	Grinding	6	

8.1	Significance of grinding operations	1	
8.2	Manufacturing of grinding wheels	2	
8.3	Criteria for selecting of grinding wheels	1	
8.4	Specification of grinding wheels with example Working of • Cylindrical Grinder • Surface Grinder • Centreless Grinder	2	
Chapter-9	Internal Machining operations	6	
	Classification of drilling machines		
9.1	Working of • Bench drilling machine • Pillar drilling machine • Radial drilling machine	2	
9.2	Boring • Basic Principle of Boring • Different between Boring and drilling	2	
9.3	Broaching • Types of Broaching(pull type, push type) • Advantages of Broaching and applications	2	
Chapter-10	Surface finish, lapping	4	
10.1	Definition of Surface finish	2	
10.2	Description of lapping& explain their specific cutting.	2	

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