

LESSON PLAN

SESSION		SUMMER 2023				
SEMESTER		4TH				
BRANCH		MECHANICAL ENGINEERING				
SECTION		A&B				
THEORY NO.		2				
SUBJECT		MANUFACTURING TECHNOLOGY				
LECTURER		Er. SANJAY KUMAR MISHRA & Er KANHU MALLIK				
SL NO.	MONTH	CHAPTER NO.	DATE	TOPICS TO BE COVERED	NO. OF ACADEMIC DAYS AVAILABLE FOR THE SUBJECT	% COVERED
1	Feb-23	1	23.2.23	1.1 Composition of various tool materials 1.2 Physical properties& uses of such tool materials.	5	9%
			24.2.23	1.1 Composition of various tool materials 1.2 Physical properties& uses of such tool materials.		
			25.2.23	1.1 Composition of various tool materials 1.2 Physical properties& uses of such tool materials.		
		2	27.2.23	2.1 Cutting action of various and tools such as Chisel, hacksaw blade, dies and reamer		
			28.2.23	2.1 Cutting action of various and tools such as Chisel, hacksaw blade, dies and reamer		
2	Mar-23	2	1.3.23	2.3 Turning tool geometry and purpose of tool angle	24	43%
			2.3.23	2.3 Turning tool geometry and purpose of tool angle		
			3.3.23	2.5 Machining process parameters (Speed, feed and depth of cut)		
			4.3.23	2.6 Coolants and lubricants in machining and purpose		
		3	6.3.23	3.1 Construction and working of lathe and CNC lathe ☐ Major components of a lathe and their function		
			9.3.23	3.1 Construction and working of lathe and CNC lathe ☐ Major components of a lathe and their function		
			10.3.23	3.1 Operations carried out in a lathe(Turning, thread cutting, taper turning, internal machining, parting off, facing, knurling) ☐ Safety measures during machining		
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2	Mar-23	3	13.3.23	3.2 Capstan lathe ☒ Difference with respect to engine lathe	24	43%
			14.3.23	3.2 Major components and their function		
			15.3.23	3.2 Define multiple tool holders		
			16.3.23	3.3 Turret Lathe ☒ Difference with respect to capstan lathe		
			17.3.23	3.3 Major components and their function		
			18.3.23	3.4 Draw the tooling layout for preparation of a hexagonal bolt & bush		
		4	20.3.23	4.1 Potential application areas of a shaper machine		
			21.3.23	4.2 Major components and their function		
			22.3.23	4.3 Explain the automatic table feed mechanism		
			23.3.23	4.4 Explain the construction & working of tool head		
			24.3.23	4.5 Explain the quick return mechanism through sketch		
			25.3.23	4.6 State the specification of a shaping machine.		
		5	27.3.23	5.1 Application area of a planer and its difference with respect to shaper		
			28.3.23	5.2 Major components and their functions		
			29.3.23	5.3 The table drive mechanism		
31.3.23	5.4 Working of tool and tool support					
3	Apr-23	5	3.4.23	5.5 Clamping of work through sketch	15	27%
		6	4.4.23	6.1 Types of milling machine and operations performed by them and also same for CNC milling machine		
			5.4.23	6.2 Explain work holding attachment		
			6.4.23	6.3 Construction & working of simple dividing head, universal dividing head		
			8.4.23	6.4 Procedure of simple and compound indexing		
			10.4.23	6.5 Illustration of different indexing methods		
		7	11.4.23	7.1 Major components and their function		
			12.4.23	7.2 Construction and working of slotter machine		
			13.4.23	7.3 Tools used in slotter		
		8	24.4.23	8.1 Significance of grinding operations		
			25.4.23	8.2 Manufacturing of grinding wheels		
			26.4.23	8.3 Criteria for selecting of grinding wheels		
			27.4.23	8.4 Specification of grinding wheels with example Working of ☒ Cylindrical Grinder		
		28.4.23	8.4 Surface Grinder ☒ Centreless Grinder			
		9	29.4.23	Classification of drilling machines 9.1 Working of ☒ Bench drilling machine		
4	May-23	9	1.5.23	Classification of drilling machines 9.1 Working of ☒ Bench drilling machine	11	21%
			2.5.23	☒ Pillar drilling machine		
			3.5.23	☒ Radial drilling machine		

4	May-23	9	4.5.23	9.2 Boring <input checked="" type="checkbox"/> Basic Principle of Boring	11	21%
			6.5.23	<input checked="" type="checkbox"/> Different between Boring and drilling		
			8.5.23	9.3 Broaching <input checked="" type="checkbox"/> Types of Broaching (pull type, push type)		
			9.5.23	<input checked="" type="checkbox"/> Advantages of Broaching and applications		
		10	10.5.23	10.1 Definition of Surface finish		
			11.5.23	10.1 Definition of Surface finish 10.2 Description of lapping & explain their specific cutting		
			12.5.23	10.2 Description of lapping & explain their specific cutting.		
		13.5.23	REVISION			

BRIEF SUMMARY OF THE PLAN			
SL. NO.	MONTH	UNIT/CHAPTER TO BE COVERED	% COVERAGE
1	Feb-23	CH-1 & CH-2	9%
2	Mar-23	CH-2, CH-3, CH-4 & CH-5	43%
3	Apr-23	CH-5, CH-6, CH-7, CH-8 & CH-9	27%
4	May-23	CH-9 & CH-10	21%

Saigya K. Mishra
21/02/23
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21-02-23