

GOVT. POLYTECHNIC MAYURBHANJ

ACADEMIC SESSION-2024-25

LESSON PLAN

Discipline : Mechanical Engg.		Semester: 4th Sem	Name of the Teaching Faculty : Mihir mohanta
Subject : MT		No. of Days / per week class allotted : 04	Semester From date :04.02.2025 To Date : 17.05.2025
MONTH	Week	Day	Topics
FEBRUARY	2ND	2ND	1. Tool Materials : Discuss about Tool and tool material,
		3RD	Describe Composition of various tool materials, Physical properties& uses of such tool materials.
		3RD	Cutting Tools: Discuss about Cutting action of various tools such as Chisel, hacksaw blade,
	3RD	1ST	Discuss about Cutting action of various tools such as dies and reamer
		2ND	Discuss about Turning tool geometry , purpose of tool angle
		3RD	Discuss about Turning tool geometry , purpose of tool angle
		3RD	Discuss about Turning tool geometry , purpose of tool angle
	4TH	1ST	Machining process parameters (Speed, feed and depth of cut),Coolants and lubricants in machining and purpose
		2ND	Revision
		3RD	3. Lathe Machine: Construction and working of lathe and CNC lathe ,Major components of a lathe and their function
		3RD	Lathe Machine: Construction and working of lathe and CNC lathe ,Major components of a lathe and their function
		1ST	Operations carried out in a lathe(Turning, thread cutting, taper turning, internal machining)
		2ND	Operations carried out in a lathe parting off, facing, knurling ,Define multiple tool holders
	MARCH	2ND	1ST
2ND			Turret Lathe :Difference with respect to capstan lathe and Major components and their function
3RD		1ST	Draw the tooling layout for preparation of a hexagonal bolt &bush
		2ND	Revision
		3RD	4. Shaper : Potential application areas of a shaper machine, Major components and their function
		3RD	Explain the automatic able feed mechanism,
4TH		1ST	Explain the construction &working of tool head
		2ND	Explain the quick return mechanism through sketch
		3RD	Explain the quick return mechanism through sketch
		3RD	Revision

	5TH	1ST	5.Planning Machine: Application area of a planer and its difference with respect to shaper, Major components and their functions.	
		2ND	Discuss about the table drive mechanism	
		3RD	Discuss about the table drive mechanism	
		3RD	Working of tool and tool support	
APRIL	1ST	3RD	Clamping of work through sketch	
		3RD	Revision	
	2ND	1ST	6. Milling Machine : Discuss about milling machine and its operation performed	
		2ND	Types of milling machine and operations performed by them and also same for CNC milling machine	
		3RD	Explain work holding attachment, Construction & working of simple dividing head,	
		3RD	Universal dividing head . Procedure of simple indexing,	
	3RD	2ND	Procedure of simple indexing,	
		3RD	Procedure of compound indexing,	
		3RD	Procedure of compound indexing,	
	4TH	1ST	Revision	
		2ND	7 Slotter: Major components and their function, Construction and working of slotter machine,	
		3RD	Tools used in slotter	
		3RD	Revision	
	5TH	1ST	8 Grinding: Significance of grinding operations, Manufacturing of grinding wheels,	
		2ND	Criteria for selecting of grinding wheels,	
		3RD	Specification of grinding wheels, With example Working of : Cylindrical Grinder, Surface Grinder	
		3RD	Centreless Grinder	
	MAY	2ND	1ST	9. Internal Machining operations : Classification of drilling machines, Working of Bench drilling machine
			2ND	Pillar drilling machine , Radial drilling machine
			3RD	Boring : Basic Principle of Boring , Different between Boring and drilling
3RD			Broaching :Types of Broaching(pull type, push type) Advantages of Broaching and applications	
3RD		2ND	10. Surface finish: lapping, Definition of Surface finish, Description of lapping& explain their specific cutting.	
		3RD	Lapping, Definition of Surface finish, Description of lapping& explain their specific cutting.	
		3RD	Revision	

HOD, Mechanical
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Subject Expert
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