

GOVT. POLYTECHNIC MAYURBHANJ

ACADEMIC SESSION-2022-23

LESSON PLAN

Discipline : Mechanical Engg.		Semester: 4th Sem	Name of the Teaching Faculty : Mihir mohanta
Subject : Manufacturing Technology		No. of Days / per week class allotted :	Semester From date :13.02.2023 To Date : 23.05.2023
MONTH	Week	Day	Topics
FEBRUARY	3RD	1ST	1 Tool Materials : Composition of various tool materials ,Physical properties& uses of such tool materials.
		2ND	2. Cutting Tools: Cutting action of various and tools such as Chisel, hacksaw blade, dies and reamer
		3RD	Turning tool geometry : purpose of tool angle
		3RD	Machining process parameters (Speed, feed and depth of cut)Coolants and lubricants in machining and purpose
	4TH	1ST	Revision
		2ND	3. Lathe Machine: Construction and working of lathe and CNC lathe ,Major components of a lathe and their function
		3RD	Operations carried out in a lathe(Turning, thread cutting, taper turning, internal machining)
		3RD	Operations carried out in a lathe parting off, facing, knurling ,Define multiple tool
	5TH	1ST	Capstan lathe,Difference with respect to engine lathe, Major components and their function
		2ND	Define multiple tool holders
MARCH	1ST	3RD	Turret Lathe ,Difference with respect to capstan lathe and Major components and their function
		3RD	Draw the tooling layout for preparation of a hexagonal bolt &bush
	2ND	1ST	Revision
	3RD	1ST	4.Shaper.Potential application areas of a shaper machine, Major components and their function
		2ND	Explain the automatic able feed mechanism,
		3RD	Explain the construction &working of tool head
		3RD	Explain the quick return mechanism through sketch
	4TH	1ST	Explain the quick return mechanism through sketch
		2ND	Revision
		3RD	Classtest-1
3RD		Classtest-1	

	5th	1ST	5.Planning Machine , Application area of a planer and its difference with respect to shaper, Major components and their functions,The table drive mechanism,
		2ND	Working of tool and tool support
		3RD	Clamping of work through sketch
		3RD	Revision
APRIL	2ND	1ST	6. Milling Machine
		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
	3RD	1ST	Procedure of simple indexing
		2ND	Procedure of Compound indexing
		3RD	Illustration of different indexing methods
		3RD	Revision
	4TH	1ST	7. Slotter, Major components and their function,
		2ND	Construction and working of slotter machine, Tools used in slotter
		3RD	8. Grinding
		3RD	Significance of grinding operations, Manufacturing of grinding wheels
	5TH	1ST	Internal
		2ND	Internal
		3RD	Criteria for selecting of grinding wheels, Specification of grinding wheels
		3RD	With example Working of Cylindrical Grinder, Surface Grinder
MAY	1ST	1ST	Centreless Grinder
		2ND	9.Internal Machining operati ,Classification of drilling machines,
		3RD	Working of Bench drilling machine
		3RD	Pillar drilling machine
	2ND	1ST	Radial drilling machine
		2ND	Boring :Basic Principle of Boring
		3RD	Broaching ,Types of Broaching(pull type)
		3RD	Push type Broaching , Advantages of Broaching and applications
	3RD	1ST	10 : Surface finish, lapping
		2ND	Definition of Surface finish
		3RD	Description of lapping& explain their specific cutting
		3RD	Revision
	4TH	1ST	Classtest-2
		2ND	Classtest-2
		3RD	Previous Year Question Discussion

HOD, Mechanical
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Subject Expert
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Academic Co-Ordinator
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