

GOVT. POLYTECHNIC BOLANGIR		LESSON PLAN
Discipline : Mechanical	Semester: 4th	Name of the Teaching Faculty : Sachidananda Padhi
Subject : MANUFACTURING TECHNOLOGY	No. of Days / per week class allotted : 4	Semester From date : 05.02.2025 To Date : 17.05.2025 No. of Weeks: 15
Week	Class Day	Topics
05 Feb to 08 Feb	1st	Composition of various tool materials
	2nd	Physical properties & uses of such tool materials.
	3rd	Cutting action of various hand tools such as Chisel, hack saw blade, dies and reamer
	4th	Machining process parameters (Speed, feed and depth of cut)
10 Feb to 15 Feb	1st	Machining process parameters (Speed, feed and depth of cut)
	2nd	Turning tool geometry and purpose of tool angle
	3rd	Coolants and lubricants in machining and purpose
	4th	Major components of a lathe and their function
17 Feb to 22 Feb	1st	Operations carried out in a lathe (Turning, thread cutting, taper turning,
	2nd	Safety measures during machining
	3rd	Difference with respect to engine lathe
	4th	Major components and their function
24 Feb to 01 Mar	1st	Define multiple tool holders
	2nd	Difference with respect to capstan lathe
	3rd	Major components and their function
	4th	Draw the tooling lay out for preparation of a hexagonal bolt & bush
03 Mar to 08 Mar	1st	Potential application areas of a shaper machine
	2nd	Major components and their function
	3rd	Explain the automatic table feed mechanism
	4th	Explain the construction & working of tool head
10 Mar to 15 Mar	1st	Explain the quick return mechanism through sketch
	2nd	State the specification of a shaping machine.
	3rd	Application area of a planar and its difference with respect to shaper
	4th	Major components and their functions
17 Mar to 22 Mar	1st	The table drive mechanism
	2nd	Working of tool and tool support
	3rd	Clamping of work through sketch.
	4th	Types of milling machine and operations performed by them
24 Mar to 29 Mar	1st	Types of milling machine and operations performed by them
	2nd	Explain work holding attachment
	3rd	Construction & working of simple dividing head, universal dividing head
	4th	Procedure of simple and compound indexing
31 Mar to 05 Apr	1st	Illustration of different indexing methods
	2nd	Major components and their function
	3rd	Construction and working of slotter machine
	4th	Tools used in slotter
07 Apr to 12 Apr	1st	Significance of grinding operations
	2nd	Manufacturing of grinding wheels
	3rd	Criteria for selecting of grinding wheels
	4th	Cylindrical Grinder
14 Apr to 19 Apr	1st	Centre less Grinder & Surface Grinder
	2nd	Bench drilling machine & Pillar drilling machine
	3rd	Radial drilling machine
	4th	Basic Principle of Boring
21 Apr to 26 Apr	1st	Different between Boring and drilling & Types of Broaching (pull type, push type)
	2nd	Definition of Surface finish, Define super finishing
	3rd	Description of lapping & explain their specific cutting.
	4th	

28 Apr to 03 May	1st	Revision
	2nd	Class test
	3rd	Q & A discussion
	4th	Doubt Clearing
05 May to 10 May	1st	Revision
	2nd	Class test
	3rd	Q & A discussion
	4th	Doubt Clearing
12 May to 17 May	1st	Revision
	2nd	Class test
	3rd	Q & A discussion
	4th	Doubt Clearing

Sachidananda Reddy
03-02-25