

GOVERNMENT POLYTECHNIC JAIPUR
A/ P: Ragadi, Block: Korei, Dist.: Jaipur, Odisha- 755019

DEPARTMENT OF PRECISION MANUFACTURING ENGINEERING

LESSON PLAN

Discipline: PME	Semester: 3rd	Name of the Teaching faculty: Suprava Behera
Subject-Production Technology	No of Days/Week class allotted: 3	Semester from Date: 14.07.2025 To Date: 15.11.2025 No of weeks: 15
SL.NO	Class/Day	TOPICS TO BE COVERED
1	1st	Introduction to Lathe: The centre lathe and its principle of working
	2nd	Types of lathes
	3rd	Lathe specification and size
2	1st	Features of lathe bed
	2nd	Head stock and tail stock
	3rd	Feed mechanism and change gears
3	1st	Carriage saddle, Cross slide
	2nd	Compound rest, Tool post
	3rd	Apron mechanism
4	1st	Lathe accessories, Chucks
	2nd	Face plate, Angle plate
	3rd	Driving plate, Lathe dogs
5	1st	Mandrills, Steady rest
	2nd	Lathe attachments
	3rd	Plane and step turning, Taper turning
6	1st	Screw cutting
	2nd	Drilling, Boring, reaming
	3rd	Knurling, Parting off
7	1st	Types of lathe tools and their uses
	2nd	Brief description of semi-automatic lathes such as capstan
	3rd	Brief description of semi-automatic lathes such as turret lathes
8	1st	Advantages and disadvantages of Capstan and Turret lathe over centre lathe
	2nd	General and periodic maintenance of a centre lathe.

	3rd	Differentiate between Capstan and Turret lathe
9	1st	Column and knee type milling machine
	2nd	Fixed bed type milling machine
	3rd	Planner type milling machine
10	1st	Special purpose milling machine
	2nd	Constructional features of horizontal milling machine
	3rd	General maintenance of milling machine
11	1st	Types of milling cutters
	2nd	Milling operations like plane milling, face milling, angular milling, form milling
	3rd	Straddle milling, gang milling, cutting speed and feed for different tools.
12	1st	Up and down milling
	2nd	Simple and Compound indexing
	3rd	Differential indexing
13	1st	Centre less, internal and external grinding machines
	2nd	Bench and portable grinder, Tool and cutter grinding machine.
	3rd	Tool and cutter grinding machine. Methods of mounting work piece on cylindrical grinding machines (Including chuck and mandrel).
14	1st	Honing, lapping process
	2nd	Buffing and super finishing processes.
	3rd	Terms associated with grinding wheel operations including loading, glazing, dressing and truing(i. Nomenclature. ii. Types and shapes. iii. Designation system and its interpretation.
15	1st	Static and dynamic balancing of grinding wheels - need and methods.
	2nd	Methods of mounting grinding wheel.
	3rd	Probable question discussion


 10.07.25
 FACULTY SIGNATURE