

GOVERNMENT POLYTECHNIC, JAJPUR
DEPARTMENT OF PRECISION MANUFACTURING ENGINEERING



LESSON PLAN

SUBJECT: PRODUCTION TECHNOLOGY (TH1)

FACULTY: Mrs. SUNITA NAYAK

ACCADEMIC SESSION: 2026-27

SEMESTER: 3RD

Sunita Nayak

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HOD (PME)

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Discipline: Precision Manufacturing Engg.	SEM-3RD	Name of the teaching faculty: Mrs. SUNITA NAYAK
Subject: Production Technology (Th1)	No. of days/week class allotted- 3 Periods per week (Tue-1Period, Fri-1Period, Sat- 2 Period)	Semester From Date: 01-07-2026 To Date: 05-11-2026 No. of weeks: 19 weeks
Week	Class Day	Theory Topics
1 st	03/07/2026	Discussion of syllabus. Definition of production technology and application of it.
	04/07/2026	UNIT-I Introduction to Lathe: The Centre lathe and its principle of working
2 nd	07/07/2026	Types of lathes
	10/07/2026	Lathe specification and size
3 rd	14/07/2026	Features of lathe bed
	17/07/2026	UNIT-II Lathe parts and Mechanism: Head stock and tail stock
	18/07/2026	Feed mechanism and change- gears
4 th	21/07/2026	Carriage saddle, Cross slide
	24/07/2026	Compound rest , Tool post
5 th	28/07/2026	Apron mechanism.
	31/07/2026	UNIT-III Lathe accessories: Lathe accessories, Chucks
	01/08/2026	Face plate, Angle plate, Driving plate, Lathe dogs, mandrills

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6 th	04/08/2026	Steady rest, Lathe attachments
	07/08/2026	UNIT-IV Lathe operations: plane and step turning, Taper turning,
7 th	11/08/2026	Screw cutting, Drilling, Boring, reaming
	14/08/2026	Knurling, Parting off. Types of lathe tools and their uses
8 th	18/08/2026	UNIT-V Capstan and Turret lathe: Brief description of semi-automatic lathes such as capstan lathe and turret lathes
	21/08/2026	Their advantages and disadvantages over Centre lathe.
9 th	25/08/2026	General and periodic maintenance of a centre lathe.
	28/08/2026	UNIT- VI Introduction to Milling: Types of milling machines
	29/08/2026	Constructional features of horizontal milling M/C.
10 th	01/09/2026	UNIT-VII Milling cutters and maintenance: General maintenance of the machine, Types of milling cutters
	05/09/2026	UNIT-VIII Milling operations: Milling operations like plane milling, face milling, angular milling,
11 th	08/09/2026	Form milling, straddle milling, gang milling
	11/09/2026	Cutting speed and feed for different tools in up and down milling.
12 th	18/09/2026	Simple, compound, and differential indexing
	19/09/2026	UNIT-IX Introduction to Grinding: Classification, working, application of following grinding machines with “commonly used grinding wheels and work piece materials” i. Cylindrical (centre less, internal and external) grinding machines.
13 th	22/09/2026	ii. Bench and portable grinder.
	25/09/2026	iii. Tool and cutter grinding machine.

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14 th	29/09/2026	iv. Profile grinding machine.
	03/10/2026	Methods of mounting work piece on cylindrical grinding machines (Including chuck and mandrel).
15 th	06/10/2026	Honing, lapping, buffing and other super finishing processes.
	09/10/2026	UNIT-X Grinding wheels and operations: Terms associated with grinding wheel operations including loading, glazing, dressing and truing.
16 th	13/10/2026	Grinding wheels: i. Nomenclature. ii. Types and shapes.
	16/10/2026	iii. Designation system and its interpretation. iv. Selection criteria.
17 th	23/10/2026	Static and dynamic balancing of grinding wheels - need and methods.
18 th	27/10/2026	Methods of mounting grinding wheel.
	30/10/2026	Revision
	31/10/2026	Revision
19 th	03/11/2026	Revision