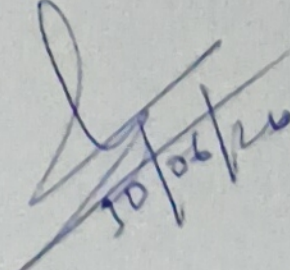


Govt. Polytechnic, Mayurbhanj
Session: 2026-27
Lesson Plan

Discipline: Metallurgical Engineering	Semester: 3 rd	Name of the Teaching Faculty: Sumeeta Rani Sarap	
Subject: Foundry Technology (TH:4(A))	No. of days/per week class allotted: 03	Semester from Date: 01. 07. 2026 to Date: 05.11.2026 No. of weeks: 15	
Week	Class	Module	Lecture Topic
1	1	Unit I	Introduction to Foundry Technology, Definition
	2		Scope and Applications of Foundry Technology
	3		Principles of Metal Casting
2	4		Basic Steps in Making a Casting
	5		Advantages and Disadvantages of Metal Casting
	6		Types of Patterns
3	7		Pattern Materials
	8		Pattern Allowances
	9		Revision & Tutorial
4	10		Introduction to Moulding Sand
	11	Unit II	Types of Moulding Sand
	12		Classification Based on Grain Size
5	13		Classification Based on Grain Shape
	14		Properties of Moulding Sand

	15		Facing Sand and Backing Sand
6	16		Moisture Content Test
	17		AFS Grain Fineness Number Test
	18		Clay Content Test
7	19		Mould Hardness Test
	20		Permeability Number Test
	21		Compression Strength Test
8	22		Binders: Functions and Types
	23		Core: Definition, Functions and Characteristics
	24		Tutorial & Numerical Problems
9	25		Gating System
	26		Risers: Functions and Types
	27		Size & Shape of Risers
10	28		Directional Solidification
	29		Chvorinov's Rule
	30		Cupola Furnace: Construction
11	31	Unit III	Cupola Furnace: Operation
	32		Gravity Die Casting
	33		Pressure Die Casting
12	34		Hot Chamber and Cold Chamber Die Casting
	35		Centrifugal Casting (True, Semi, Centrifuging)
	36		Investment Casting Process
13	37		Industrial Applications of Various Casting Methods
	38		Tutorial & Numerical Problems


30/06/20