

Lesson Plan

Subject : Mechanical Metallurgy(TH-2)

Name of faculty: SAGARIKA PALEI

Semester: 6th

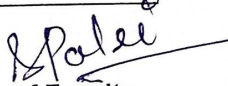
Class allotted: 4p/week

Branch: Metallurgy

Session: 2026(S)

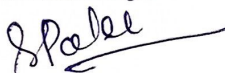
Discipline	Semester	From date: 22/12/2025 To date: 18/04/2026	Teaching Aid
Subject:	No. of days/ per week	Theory/ Practical –Topics/Lesson	
Week	Date/Period		
1	22/12/2025 TO 27/12/2025	<p style="text-align: center;">Introduction :</p> <p>Dislocation, types, its basic behavior & role in deformation.</p> <p>Dislocation in various crystals .</p>	White Board Marker Smart board
2	29/12/2025 TO 03/01/2026	<p>Source of dislocation.</p> <p>Twinning & deformation.</p>	White Board Marker Smart board
3	05/01/2026 TO 10/01/2026	<p>Slip & Deformation</p> <p>Deformation of metals: Explain the elastic & plastic behavior of metals</p> <p>Explain yielding criteria.</p>	White Board Marker Smart board
4	12/01/2026 TO 17/01/2026	<p>Derive critically resolved shear stress.</p> <p>Explain deformation of polycrystalline aggregates</p> <p>Strengthening mechanism: Explain strengthening mechanism ..</p>	White Board Marker Smart board
5	19/01/2026 TO 24/01/2026	<p>Describe the role of grain boundary in strengthening</p> <p>Define Hall Petch equation .</p> <p>Describe yield point phenomenon.</p>	White Board Marker Smart board


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6	27/01/2026 TO 31/01/2026	Explain strain-aging. Explain solid solution strengthening from fine particles . Describe fiber strengthening .	White Board Marker Smart board
7	02/02/2026 TO 07/02/2026	Describe martensitic strengthening . Explain strain hardening . Describe Bauschinger's effect..	White Board Marker Smart board
8	09/02/2026 TO 14/02/2026	Fundamentals of Metal working: Classify different metal working process. Explain hot working and cold working of metals and alloys.	White Board Marker Smart board
9	16/02/2026 TO 21/02/2026	State the advantages and disadvantages of hot and cold working . Recovery, recrystallization and grain growth Explain the following phenomena,	White Board Marker Smart board
10	23/02/2026 TO 28/02/2026	(a) Recovery (b) Recrystallization	Marker White Board Smart board
11	02/03/2026 TO 07/03/2026	(c) Grain growth Rolling: Explain principles of rolling	White Board Marker Smart board
12	09/03/2026 TO 14/03/2026	. Compare between hot rolling and cold rolling. Explain the types of roll pass-open pass and Box pass.	Marker White Board Smart board


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13	16/03/2026 TO 18/03/2026	, State different types of rolling defects and their control. Forging: Explain types of forging process.	White Board Marker Smart board
14	23/03/2026 TO 28/03/2026	Describe the properties of forged products Explain the manufacturing of seamless pipes	White Board Marker Smart board
15	30/03/2026 TO 04/03/2026	Wire drawing: Explain the elementary principle of wire drawing . Classify the defects of wire drawing.	White Board Marker Smart board
16	06/04/2026 TO 11/04/2026	Forming methods Describe the elementary concept of deep drawing .	White Board Marker Smart board
17	13/04/2026 TO 18/04/2026	Explain different sheet metal forming - bending shearing aid blanking	White Board Marker Smart board

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