

## Lesson Plan

Subject : Mechanical Metallurgy(TH-2)

Name of faculty:

Semester: 6<sup>th</sup>

Class allotted: 4p/week

Branch: Metallurgy

Session: 2025(S)

Discipline	Semester	From date:	To date:	Teaching Aid
Subject:	No. of days/ per week	Theory/ Practical –Topics/Lesson		
Week	Date/Period			
1	04/02/2025 TO 08/02/2025	<b>Introduction :</b> Dislocation, types, its basic behavior & role in deformation. Dislocation in various crystals .		White Board Marker Smart board
2	10/02/2025 TO 15/02/2025	Source of dislocation. Twinning & deformation. Slip & Deformation.		White Board Marker Smart board
3	17/02/2025 TO 22/02/2025	<b>Deformation of metals:</b> Explain the elastic & plastic behavior of metals .Explain yielding criteria.		White Board Marker Smart board
4	24/02/2025 TO 01/03/2025	Derive critically resolved shear stress. Explain deformation of polycrystalline aggregates <b>Strengthening mechanism:</b> Explain strengthening mechanism .. Describe the role of grain boundary in strengthening		White Board Marker Smart board
5	03/03/2025 TO 08/03/2025	Define Hall Petch equation . Describe yield point phenomenon. Explain strain-aging. Explain solid solution strengthening from fine particles . Describe fiber strengthening .		White Board Marker Smart board

  
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6	10/03/2025 TO 15/03/2025	Describe martensitic strengthening . Explain strain hardening . Describe Bauschinger's effect..	White Board Marker Smart board
7	17/03/2025 TO 22/03/2025	<b>Fundamentals of Metal working:</b> Classify different metal working process. Explain hot working and cold working of metals and alloys.	White Board Marker Smart board
8	24/03/2025 TO 29/03/2025	State the advantages and disadvantages of hot and cold working .	White Board Marker Smart board
9	31/03/2025 TO 05/04/2025	<b>Recovery, recrystallization and grain growth</b> Explain the following phenomena, ( a) Recovery (b) Recrystallization (c) Grain growth	White Board Marker Smart board
10	07/04/2025 TO 12/04/2025	<b>Rolling:</b> Explain principles of rolling Compare between hot rolling and cold rolling.	Marker White Board Smart board
11	14/04/2025 TO 19/04/2025	Explain the types of roll pass-open pass and Box pass. State different types of rolling defects and their control.	White Board Marker Smart board
12	21/04/2025 TO 26/04/2025	<b>Forging:</b> Explain types of forging process. Describe the properties of forged products Explain the manufacturing of seamless pipes	Marker White Board Smart board
13	28/04/2025 TO 03/05/2025	<b>Wire drawing:</b> Explain the elementary principle of wire drawing . Classify the defects of wire drawing.	White Board Marker Smart board
14	05/05/2025 TO 10/05/2025	<b>Forming methods</b> Describe the elementary concept of deep drawing .Explain different sheet metal forming - bending shearing and blanking	White Board Marker Smart board

  
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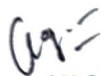
  
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15

12/05/2025  
TO  
17/05/2025

Revision.....

White Board  
Marker  
Smart board



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