

LESSON PLAN

Discipline: Metallurgical Engineering	Semester: 3rd Semester	Name of the Teaching Faculty: Er Suvendu Muduli
Subject: MINERAL PROCESSING LAB Sub code: (PR:1) MTPC211	No of days /week class allotted:8	Semester From Date 01/07/2026-05/11/2026 No of weeks: 19

Course Outcomes :

CO1 - To apply various mineral dressing methods (e.g., flotation, gravity separation, magnetic separation, comminution) to process ore samples and extract valuable minerals.

CO2- To gain hands-on experience with the operation and maintenance of various mineral processing equipment used in the laboratory (e.g., flotation cells, crushers, mills, magnetic separators).

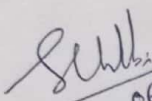
CO3 – To perform comminution (crushing and grinding) experiments to liberate valuable minerals from the ore and evaluate the efficiency of particle size reduction.

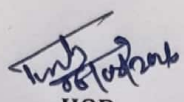
CO4- To effectively communicate the results of their experiments through clear and comprehensive technical reports, including data analysis, conclusions, and recommendations.

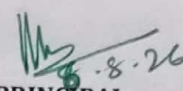
Month	week	No of periods available	Class Day	Theory topics	CO
JULY	1st	4P	01-07-2026	Briefing about syllabus	CO1
	2nd	8P	06-07-2026	Study of Laboratory Ball Mill and to perform a grinding test on the given sample, and to analyze size distribution in the product by sieve analysis and to calculate grindability index.	CO1
			08-07-2026	Lab record checking	CO1
	3rd	8P	13-07-2026	Machine Study of Wilfley Table and to perform a gravity separation test on the given sample.	CO1
			15-07-2026	Lab record checking	CO1
	4TH	8P	20-07-2026	To study the principle and operation of Laboratory Flotation Machine, and to perform a froth flotation test on a coal sample .	CO1
			22-07-2026	Lab record checking and submission	CO1

	5th	8P	27-07-2026	Crushing of Ore in a roll crusher, and Determination of average size by sieving.	CO2
			29-07-2026	Lab record checking	CO2
AUG	2nd	8P	03-08-2026	Crushing of Ore in the Jaw Crusher, and Determination of average size by sieving.	CO2
			05-08-2026	Viva	CO2
	3rd	8P	10-08-2026	Lab record checking and submission	CO2
			12-08-2026	Study of magnetic separator, and effect of field on efficiency of the process.	CO2
	4th	8P	17-08-2026	Doubt Clear	CO2
			19-08-2026	VIVA	CO2
	5th	8P	24-08-2026	Lab record checking and submission	CO2
			31-08-2026	To determine and analyze the size distribution of a fixed granular solid by using a Test Sieve Stack.	CO2
SEPT	1st	8P	02-09-2026	Doubt clear	CO2
	2nd	8P	07-09-2026	VIVA	CO2
			09-09-2026	Lab record checking	CO3
	3rd	8P	21-09-2026	To determine and analyze the size distribution of a fixed granular solid by using a Test Sieve Stack.	
			23-09-2026	Doubt Clear	CO3
	4th	8P	28-09-2026	VIVA	CO3
			30-09-2026	Lab record checking and submission	CO3
OCT	2nd	8P	05-10-2026	Jigging: Separation of coarse particles based on differential settling.	CO3
			07-10-2026	Doubt Clear	CO3

	3rd	8P	12-10-2026	viva	CO4
			14-10-2026	Lab record checking and submission	CO4
	4th	4P	21-10-2026	Electrostatic Separator – Separation of conductors vs. non-conductors (rutile, zircon).	CO4
	5th	8P	26-10-2026	viva	CO4
			28-10-2026	Doubt Clear	CO4
NOV	1st	4P	02-11-2026	Lab record checking and submission	CO4


 06/08/2026
 PREPARED BY
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 06/08/2026
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 06-8-26
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