

**DEPARTMENT OF MINING ENGINEERING**

**LESSON PLAN**

**Discipline: Mining Engineering**

**Semester: 6th**

**Name of the Teaching faculty: Ghanshyam Dhurua**

**Subject: Mineral Dressing**

**No of Days/Week class allotted: 4**

**Semester from Date: 14/2/2023 To Date: 23/5/2023**  
**No of weeks: 15**

Month	Week	Nos. of Period Available	Class Day	CHAPTER	Topics
FEB	1st	3	16.02.23	1.0 Introduction	Introduction to Syllabus and Subject
			16.02.23		Describe the objective & scope of application of mineral dressing in surface mines & u/g mines.
			17.02.23	2.0 Unit Operation	Explain the principle of Blake jaw crushers.
	2nd	4	20.02.23		Explain the principle of dodge jaw crushers.
			23.02.23		Explain the principle of gyratory & cone crushers.
			23.02.23		Explain the principle of roll crusher.
			24.02.23	3.0 Grinding	Explain the principle of ball mill operation.
	3rd	4	27.02.23		Discuss open circuit grinding.
			02.03.23		Discuss Close circuit grinding.
			02.03.23		Explain dry & wet grinding.
			03.03.23		Explain dry & wet grinding.
MAR	4th	4	06.03.23	4.0 Size analysis & use of standard screen	Explain the procedure for size analysis
			09.03.23		Explain the procedure for size analysis
			9.03.23		Explain the use of standard screen as also screening techniques employed
			10.03.23		Explain the use of standard screen as also screening techniques employed
	5th	4	13.03.23	5.0 Industrial screening	Explain the principle of industrial screening
			16.03.23		Explain the principle of industrial screening
			16.03.23		type of screening ( without calculation)
			17.03.23		type of screening ( without calculation)
	6th	4	20.03.23	6.0 Gravity concentration	Explain the operation of classifier & their application.
			23.03.23		<b>MONTHLY CLASS TEST 1</b>
			23.03.23		Explain the operation of classifier & their application.
			24.03.23		Explain the general principles of wilfly table & its operation.
	7th	3	27.03.23		Explain the general principles of wilfly table & its operation.
			31.03.23		Explain the fundamental principle of heavy media separation – Chance process

			31.03.23	7.0 Heavy media separation	Explain the fundamental principle of heavy media separation – Chance process
APR	8th	3	03.04.23		Explain the fundamental principle of heavy media separation – Chance process
			06.04.23	8.0 Floatation	Comprehend elementary principle of froth floatation
			06.04.23		Comprehend elementary principle of froth floatation
			10.04.23		Comprehend elementary principle of froth floatation
	9th	3	13.04.23		Practical utility of frother.
			13.04.23		Practical utility of frother.
			17.04.23		Practical utility of frother.
	10th	4	20.04.23		Utility of frother, collection, modifiers & depressants.
			20.04.23		Utility of frother, collection, modifiers & depressants.
			21.04.23		Utility of frother, collection, modifiers & depressants.
	11th	4	24.04.23		Describe & illustrate floatation cell.
			27.04.23		Describe & illustrate floatation cell.
			27.04.23		Describe & illustrate floatation cell.
			28.04.23		Describe & illustrate floatation cell.
MAY	12th	3	1.05.23		<b>Internal Assessment</b>
			4.05.23		Describe & illustrate floatation cell.
			4.05.23		<b>MONTHLY CLASS TEST 2.</b>
	13th	4	8.05.23	9.0 Magnetic & Electrostatic Separators	Explain the principle of operation of magnetic separators.
			11.05.23		Explain the principle of operation of magnetic separators.
			11.05.23		Explain the principle of operation of electrostatic separators
			12.05.23		Explain the principle of operation of electrostatic separators
	14th	3	15.05.23		Describe the application of separators in mineral dressing.
			18.05.23		Describe the application of separators in mineral dressing.
			18.05.23		previous year question discussion
	15th	1	22.05.23		previous year question discussion

  
Prepared By-

Ghanshyam Dhurua  
Sr. Lect.(Mining)  
OSME,Keonjhar

  
HOD  
Mining Engg.  
OSME,Keonjhar

  
Principal  
OSME,Keonjhar