COURSE TYPE	COURSE CODE	NAME OF THE COURSE	L	T	P	CREDIT
DP	NFMC511	Fines Processing Lab	0	0	3	1.5

COURSE OBJECTIVE

To provide hands-on training about the processing of fines for mineral processing and coal preparation processes

LEARNING OUTCOMES

After successful completion of the course, the students will be

- Familiarized with characterization techniques specific to fines
- Knowledge of the cleaning processes applied to fines
- Understand the processes applied for dewatering and drying fines

NO.	TOPICS TO BE COVERED	HOURS	LEARNING OUTCOME
1	Orientation of Fines Processing Lab	3	Introduction to Fines Processing Lab
2	Sub-sieve size analysis using beaker decantation and Andreasen pipette	3	Familiarization with the sub-sieve size analysis techniques
3	Sub-sieve size analysis using Cyclosizer and Laser Diffraction	3	
4	Beneficiation testing using a Mozley Mineral Separator	3	Experience in using a Mozley Mineral Separator
5	Beneficiation studies using a laboratory Wilfley Table and assessment of the effect of parameters	3	Experience in using a laboratory Wilfley Table
6	Beneficiation studies using a laboratory WHIMS and assessment of the effect of parameters	3	Experience in using a laboratory WHIMS
7	Beneficiation studies using a laboratory IRMS and assessment of the effect of parameters	3	Experience in using a laboratory IRMS
8	Beneficiation studies using a laboratory electrical separator and assessment of the effect of parameters	3	Experience in using a laboratory electrical separator
9	Beneficiation studies on a copper/lead-zinc ore sample using Froth Flotation and assessment of the effect of collector dosage	3	Understanding of the flotation process for an ore
10	Beneficiation studies on a coal sample using Froth Flotation and assessment of the effect of frother dosage	3	Understanding of the flotation process for coal
11	Beneficiation studies on a coal sample using Oil Agglomeration and assessment of the effect of parameters	3	Familiarization with the oil agglomeration process

12	Beneficiation studies using selective flocculation and assessment of the effect of parameters	3	Familiarization with selective flocculation
13	Settling studies on given fines samples and assessment of the effect of parameters	3	Knowledge of the settling test work
14	Drying studies on given fines samples and assessment of the effect of parameters	3	Familiarization with drying of fines
	Total	**42**	

TEXT BOOKS:

1. Fines Processing Laboratory Manual by FMME Department, IIT (ISM) Dhanbad