Course Type	Course Code	Name of Course	L	T	P	Credit
DSC	NMNC104	**Mine Model Laboratory**	0	0	2	1

Course Objective
To familiarise the students about different mining methods by engaging them in development of 3D models using different tools.
Learning Outcomes
Upon successful completion of this course, students can: • Learn about different mining methods   • Visualise the concepts of mining methods in 3D   • Design and develop different mine models

Unit No.	Name of the Practical	Contact Hours	Learning Outcome
1	Introduction to mine model lab	2	Students will learn about the tools, software and accessories used to make mine models
2	Demonstrations of Virtual Reality Mine Simulator (VRMS)	2	Students will be virtually acclimatised with various mining methods
3	Opencast Mine Model	2	Students will learn about the opencast mine layout and develop its model
4	Bord & Pillar Mine Model	2	Students will learn about the Bord & Pillar method of mining and develop its model
5	Longwall Mine Model	2	Students will learn about the Longwall method of mining and develop its model
6	Cut & Fill Mine Model	2	Students will learn about the Cut & Fill stoping method of mining and develop its model
7	Blasthole Stoping Mine Model	2	Students will learn about the Blasthole Stoping method of mining and develop its model
8	Underground mine ventilation circuit and control devices	2	Students will learn about the Underground mine ventilation circuit and control devices, and develop its model
9	IoT enabled mining system	2	Students will learn about the application of IoT in mines and develop a simple IoT enabled mine model
10	Model preparation	8	Students will be given an opportunity to prepare the models based on the learnings in this course
11	Evaluation of the models	2	Prepared models will be evaluated.
Total		**28**	

Note

1. The batch will be divided into 3 groups and each group will be divided into 3 sub-groups.
2. Based on the learnings in this course, each sub-group will be assigned to develop a model for evaluation.