

# GOVERNMENT POLYTECHNIC GARIYABAND (C.G.)

## DEPARTMENT OF MINING ENGINEERING

### TEACHING PLAN

Session: Jan-June 2025

Session start date as per University Calendar: 06/01/2025

Subject Name- Mine Hazards

Name of Subject teacher-Bharat Bhushana

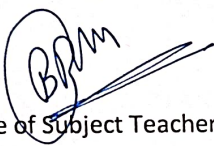
Course Code: 2039671(039)

Lecture plus Tutorial/Week-03

Lecture No.	No. & Name of chapter	Topic/Subtopics to be covered	No. of period planned	Actual no. of period taken	Planned date	Execution date	Remarks
01	Unit-01 Mine Fires	Factors responsible for mine fire, Classification of fire, Fire Extinguisher	01	01	06/01/25	06.01.25	
02		Causes of mine fire, Preventive measures against Surface and underground mine fires.	01	01	07/01/25	07.01.25	
03		Spontaneous heating; Factors responsible for spontaneous heating	01	01	08/01/25	08.01.25	
04		Preventive measures against spontaneous heating	01	01	14.01.25	14.01.25	
05-06		Fire stopping Purpose of fire stopping Types of fire stopping- Preparatory fire stopping Emergency fire stopping Permanent fire stopping	02	02	15.01.25 20.01.25	15.01.25 21.01.25	
07		Opening of a sealed of area. Fire fighting organizations	01	01	21.01.25	22.01.25	
08		Incubation period, crossing point temperature, Ignition point temperature.	01	01	22.01.25	27.01.25	
09-10		Types of explosion-Fire damp explosion, Dust explosion, Water gas explosion	02	02	27.01.25 28.01.25	28.01.25 29.01.25	
11		Causes of fire damp explosion.	01	01	29.01.25	01.02.25	
12		Precaution against fire damp explosion	01	01	03.02.25	03/02/25	
13		Upper and lower limit of fire damp explosion. Coward's	01	01	04.02.25	04.02.25	

14	Unit-02 Fire Damp Explosion	diagram					
		Limit of inflammability and Le Chatelier's principle for its measurement.	01	01	05.02.25	05.02.25	
15		History of Anjan hill gas explosion	01	01	10.02.25	10/02/25	
16		Study of other important gas explosion in Indian coal mines.	01	01	11.02.25	13.02.25	
17-18	Unit-03 Dust Explosion	Coal dust-Causes of coal dust, Precaution against coal dust	02	02	12.02.25 17.02.25	15.02.25 18.02.25	
19-20		Coal dust explosion and its mechanism, Causes of coal dust explosion.	02	02	18.02.25 19.02.25	19.02.25 20.02.25	
21		Precautions & preventive measures against coal dust explosion	01	01	24.02.25	24.02.25	
22		Stone dust -Qualities of stone dust; Handling of stone dust,	01	01	25.02.25	25/2/25	
23		Stone dust barriers	01	01	03.03.25	27.02.25	
24		Water barriers,	01	01	04.03.25	01.03.25	
25		Chemicals and chemical foams to prevent coal dust hazards	01	01	05.03.25	03.03.25	
26		Threshold value, Measurement of coal dust concentration in general body of air.	01	01	10.03.25	04.03.25	
27		Unit-04 Innundation	Causes of inundation in mines.	01	01	11.03.25	05.03.25
28-29			Sources of dangerous accumulation of water in mines.	02	02	12.03.25 17.03.25	13.03.25 15.03.25
30	Preventive measures for inundation		01	01	18.03.25	17.03.25	
31-32	Precautions for approaching water logged areas.		02	02	19.03.25 24.03.25	18.03.25 19.03.25	
33	Burnside drilling machine		01	01	26.03.25	24.03.25	
34-37	Dams – Purpose of dam, Site of dam, Types of dam and their constructional details		04	04	01.04.25 02.04.25 07.04.25	26.03.25 27.03.25 29.03.25	
38	Bulkhead door		01	01	08.04.25	02.04.25	
39-40			Rescue apparatus- SCBA- drager BG-174, Protomark IV and V	02	02	09.04.25 15.04.25	03.04.25 09.04.25
41-42		Escape apparatus-Gas mark, Self rescuer	02	02	16.04.25 21.04.25	19.04.25 21.04.25	

43	Unit-05 Mine Rescue and Recovery	Reviving apparatus - pulumometer	01	01	22.04.25	22.04.25
44		Rescue stations - equipments used in rescue station	01	01	23.04.25	23.04.25
45		Rescue and recovery work during mine fires, explosion, inundation.	01	01	28.04.25	28.04.25
46		Emergency organization and rescue plan Fresh airbase,	01	01	29.04.25	29.04.25
47		Sealing off fire area (u/g fire) and opening of sealed off areas	01	01	30.04.25	05.05.25
48		Occupational diseases in mining industry	01	01	05.05.25	08.05.25
Total			48	48		



Signature of Subject Teacher

HOD