



# GUJARAT TECHNOLOGICAL UNIVERSITY

Bachelor of Engineering

SubjectCode: 3142207

Semester– IV

SubjectName: MINE MANAGEMENT AND  
GENERAL SAFETY

Type of course: Regular

Prerequisite: Zeal to learn the subject

**Rationale:** Degree graduates are supposed to work as mine manager/ assistant manager in mines, where they have to manage the resources of the organization, i.e. equipment, manpower etc for safe, efficient and effective Mining. They should have a deep knowledge of basic surveying as well as can measure the values from various mine plans and sections.

Teaching and Examination Scheme:

Teaching Scheme			Credits C	Examination Marks				Total Marks
L	T	P		Theory Marks		Practical Marks		
				ESE (E)	PA(M)	ESE (V)	PA (I)	
3	0	0	3	70	30	00	00	100

Content:

Sr. No.	Content	Total (Hrs)	Weightage (%)
1	Elements of management functions planning, organization and control; Principles of Scientific Management, Standardization and Rationalization. Levels of management, Administration and management. The functions of organization. Types of organization. Essentials of a good organization. Characteristics of mining enterprise. Organizational structure of mining enterprise.	08	16
2	Personnel Management: Principle, Selection, training and development of human resource; job evaluation and incentive. Man power planning, recruitment, motivation, counselling skills.	04	10
3	Management by Objective : Determination of norms and standards of operations by work study, Method study and work measurement techniques – Time and Motion study.	08	16
4	Essentials of a good Wage system: Types of Wages - Nominal wage, Real wage, Living wage, Minimum wage, Fair wage, Fall back wage.	06	14
5	Materials Management: Introduction; purchase and stores management; inventory analysis and control; value analysis.	06	14



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6	Financial Management : Capital and capital management in public and private enterprises; methods of cost analysis and cost control; break-even charts; standard costing and budgetary control.	06	14
7	Accident, Health and Safety: Safety: Importance of mine safety, safety publicity Accident: Classification and analysis of accidents in mines, their causes and remedial measures. Cost of accidents, Zero accident potential working. Health: Occupational diseases, their causes and preventive measures.	08	16

**Suggested Specification table with Marks (Theory):**

## Course Outcome:

Distribution of Theory Marks					
R Level	U Level	A Level	N Level	E Level	C Level
15	25	10	10	5	5

After

learning the course the students will be able to:

The course content should be taught with the aim to develop required skills in the students so that students are able to acquire following competency:

1. Explain general and personal management techniques to manage works in a mine.
2. Explain different legal acts related to workman in mines.
3. Describe safe practices of working under the provision of mine rules and regulations.

## Books:

1. Khanna O. P. – Industrial Management
2. Singh V. N. – Mine Management – Lovely Prakshan, Dhanbad
3. Prasad and Rakesh – Mine Legislation - Lovely Prakshan, Dhanbad
4. Kaku L. C – Mine Act, Rules, Regulation - Lovely Prakshan, Dhanbad
5. UMS series – Blue Volume / Red Volume - Lovely Prakshan, Dhanbad

## List of Open Source Software/learning website:

- i. <http://en.wikipedia.org/wiki/Management>
- ii. [http://en.wikipedia.org/wiki/Scientific\\_management](http://en.wikipedia.org/wiki/Scientific_management)
- iii. [http://pblabour.gov.in/pdf/notifications/nc08\\_minimum\\_wages\\_act\\_1948.pdf](http://pblabour.gov.in/pdf/notifications/nc08_minimum_wages_act_1948.pdf)
- iv. [http://hrylabour.gov.in/docs/labourActpdfdocs/Workmen\\_Compensation\\_Act.pdf](http://hrylabour.gov.in/docs/labourActpdfdocs/Workmen_Compensation_Act.pdf)



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- v. <http://www.ilo.org/dyn/travail/docs/625/Payment%20of%20Wages%20Act%201936.pdf>
- vi. [http://en.wikipedia.org/wiki/Trade\\_unions\\_in\\_India](http://en.wikipedia.org/wiki/Trade_unions_in_India)
- vii. [http://dgms.net/ma\\_1952.pdf](http://dgms.net/ma_1952.pdf)
- viii. <http://dgms.net/mr.pdf>
- ix. <http://dgms.net/mvtr.pdf>
- x. <http://dgms.net/Mines%20Rescue%20Rules.pdf>
- xi. <http://www.slideshare.net/imranakbar/accidents-in-coal-mines>