

# GUJARAT TECHNOLOGICAL UNIVERSITY

## B.E Semester: 4 Mining Engineering

Subject Code 142201  
Subject Name Mining Machinery-I

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Sr.No	Course contents
1	Compressed Air : Pipe lines and distribution of compressed air, calculations of main parameters. Comparison of compressed air with other forms of power. Conveyor haulage different types, their construction, installation maintenance and design calculations, low profile dumpers and shuttle cars, their construction, operation and maintenance.
2	Aerial ropeways different types, their construction, installation operation and maintenance, their layout including ropetensioning arrangement.
3	Wire Ropes : Wire ropes used in mines Different types and their construction, installation and tests, Rope splicing and change of ropes. Rope caps and process of capping.
4	Transport : Track and mine car. Haulage track its laying and maintenance, gauge-selection. Mine tubs and cars their constructional details and attachments.
5	Rope haulage : Different types. Their constructions, installation, maintenance and design calculations.
6	Mine Locomotives : Different types, their construction, operation, maintenance and design calculations

### Reference Books:

1. Elements of Mining Technology, D.J.Deshmukh Part III
2. Universal Mining School- Vol. II
3. Mine Pumps, Haulage & Winding, S. Ghatak