

GUJARAT TECHNOLOGICAL UNIVERSITY

B.E Semester: 3 Mining Engineering

Subject Code 132201

Subject Name Introduction To Mining

Sr.No	Course contents
1.	Significance of Mining Industry, History of Mining, Mining & Socio-Economic impact.
2.	Mining and Surface Environment, Health and Safety.
3.	Mineral Resource of Gujarat & India, Mineral and energy resources of world, Terminology in Mining.
4.	Basis Concepts of University Mining, Mining methods for coal and non-coal deposits, Elementary ideas about Surface Mining, Comparison of underground and surface mining.
5.	Prospecting & Exploration- Reconnaissance, Principles and methods- Trenching & Pitting. Boring: Principles of boring; surface layout; method of percussive, rotary, (drilling), properties of drilling muds, Core recovery: Interpretation of borehole data, borehole logging, difficult boring, directional drilling, deflection of boreholes, Difficulties in boring.
6.	General concepts of Mine Development.
7.	Unit Operations-drills and drilling, explosives and blasting, loading and transportation.
8.	Drills & Drilling : Types of drills, drilling accessories, drillability of rocks, diamond drilling.
9.	Explosives & Blasting : Types of explosives, properties of explosives, modern explosives, initiation systems, principles of blasting, Blasting practice surface blasting, underground blasting.
10.	Loading : Basic Loading equipment and their application.
11.	Transportation : Basis ideas about Transportation equipment and their application.

Reference Books:

1. Elements of Mining Tecchnology, D.J.Deshmukh Part I, II & III
2. Mine Economics- Arvind Kumar
3. A Study of Metalliferous Mining methods, Y.P.Chacharkar
4. Universal Mining School- Part I & II
5. Coal Mining, B.Ghosh
6. Open cast Mining, B. Ghosh