

# GUJARAT TECHNOLOGICAL UNIVERSITY

## B. E. SEMESTER: V MINING ENGINEERING

Subject Name: **Advanced Mine Surveying**

Subject Code: **152204**

Teaching Scheme				Evaluation Scheme		
Theory	Tutorial	Practical	Total	University Exam (Theory) (E)	Mid Sem Exam (Theory) (M)	Practical (I)
2	0	4	6	70	30	50

Sr. No.	Content
1.	<b>Curve Ranging:</b> Definition, different methods of setting out curves (apex accessible and apex inaccessible). Elements of compound curves, Methods of setting out.
2.	<b>Correlation:</b> Methods of correlation of surface and underground surveys through inclines, One or two vertical shafts, Steeply inclined shafts, Correlation by magnetic needle, Precautions and accuracy, Use of Gyroscope.
3.	<b>Stope and Face Surveying:</b> Use of Miner's dial, Hanging compass with clinometer and theodolite in stop surveying, Tape triangulation, Traversing, Radiation and other methods, Planimeter and its use.
4.	<b>Mine Plans and Sections:</b> Legal requirements as to mine plans in India, preparation and preservation of plans and section, Representation of geological and other features in mine plans and sections, Tridimensional drawing, Enlargement of plans, Use of ediograph and pentagraph preparation of mine modes.
5.	<b>Photogrammetry:</b> Introduction to photogrammetry, Scale of a vertical photograph, Photograph versus maps, Application of phtogrammetry in mining.
6.	<b>Dip &amp; Fault problems.</b>
7.	Application of GIS, GPS and other information Technology tools in surveying and computations.

## **Reference Books:**

1. Mine Surveying and leveling (Vol I,II,III), S.Ghatak.
2. Surveying, Kanetkar.
3. U M S