Course Type	Course Code	Name of Course	L	T	P	Credit
DP	NGLC535	Exploration Geology Practical	0	0	2	1

Course Objective
The primary objective of the course is to introduce the fundamental concepts and methods of sampling, geochemical analysis, data interpretation, and reserve/resource estimation during mineral exploration program.
Learning Outcomes
Upon completion of the course, students will be able to: • Understand the different approaches and methods of sampling and resource estimation using different methods. • Can do the subsurface correlation of mineralizing zones and lodes. • Interpretation of geochemical results.

Unit No.	Topics to be Covered	Lecture Hours	Learning Outcome
1	Weighted average and grade estimation of ore body/deposits	4	Deals with the steps and conditions for calculating the weighted average and grade estimation of an ore body/deposit
2	Borehole planning based on the geochemical, structural data and elevation data	6	To learn the standard practices followed in decision making for borehole planning for different ore deposit types.
3	Resource/Reserve estimation using various methods and conditions	8	Learn to calculate the resource and reserve of the different kinds of ore body/deposit using different methods.
4	Subsurface structure delineation using litholog data and borehole deviation test.	4	Learn to identify the oxide and hydroxide ore minerals and their genetic implications.
5	Geochemical data interpretation and contouring.	6	Identification and recognition of geochemical anomalies based on the assay value and correlating the geochemical signatures with the geology.
	Total	**28**	

Text Books:

1. Reedman, J H. (1979) Techniques in Mineral Exploration: Applied Science Publishers Ltd., UK.
2. Rose, A W, Hawkes H E and Webb J S. (1983) Geochemistry in Mineral Exploration (2nd Ed.), Academic Press, London.

Reference Books:

1. Marjoribanks, R. (2010) Geological Methods in Mineral Explorationand Mining (2nd edition). Springer-Verlag
2. Peters, W.C. (1987) Exploration and Mining Geology (2nd Ed.); John Wiley & Sons, New York.