

GEOL 5305. Economic Geology Practical (1 credit)

Megascopic study and identification of ore minerals. Preparation and study of polished sections.

Seismic and Electrical Resistivity exploration problems.

Borehole problems. Preparation of lithologs using exploration data. Calculation of grade, tonnage and cut off grade. Reserve estimation. Types of reserves. Ore reserve calculation.

Mining: Mining Terminologies. Mining methods: Alluvial mining, Open Cast mining, Underground mining, Coal mining, Sea bed mining.

Fundamentals of ore dressing: Crushing, grinding, sizing, concentration by washing, scrubbing, jigging, tabling, floatation. Magnetic and Electrostatic separation. Flow charts of mineral separation.

References

- Arogyaswamy, R.N.P. (1980), Courses in Mining Geology, 2nd Ed., Oxford & IBH Pub. Co., New Delhi
- Banerjee (2001), Mineral Resources of India.
- Banerjee, P.K and Ghosh, S. (1997), Elements of Prospecting for Non-fuel Mineral Deposits, Allied Publishers Pvt Ltd, 320p.
- Kearey, P. and Brooks, M. (1991), An Introduction to geophysical Exploration, Blackwell scientific Publications, Musset, 272p.
- Mckinstry, H.E. (1947), Mining Geology, 1st Indian Ed., Asia Publishing House, New Delhi.
- Prasad, U (2002), Economic Mineral Deposits, CBS Publishers, New Delhi.
- Sinha, R.K and Sharma, N.L. (1970), Mineral Economics, New Delhi Oxford and IBH Pub.co., 317p.