

Learning Objectives

This course is designed to acquire the knowledge about the distribution of elements in minerals and rocks and their dispersion in different environments. This will help the students in learning the geochemical characteristic of various rocks and their role in mineral exploration.

Course Contents

Development of Geochemistry as a discipline. Composition of meteorites. Origin and cosmic abundance of elements. Geochemical structure of the earth. Geochemical classification of elements. Polymorphism and pseudomorphism. Geochemical cycle; mobility and dispersion of elements under different geochemical environments. Introduction to geochemistry of igneous, metamorphic and sedimentary rocks. Geochemical anomalies and their application in mineral exploration.

Lab.

Geochemical sampling and analytical techniques. Processing and interpretation of geochemical data.

8. TEACHING – LEARNING STRATEGIES

- Lecture based examination
- Presentation/seminars
- Class discussion
- Quizzes

ASSIGNMENTS – TYPE AND NUMBER WITH CALENDAR

It is continuous assessment. The weightage of Assignments will be 25% before and after midterm assessment. It includes:

- classroom participation,
- attendance, assignments and presentation,
- homework
- attitude and behavior,
- hands-on-activities,
- short tests, quizzes etc.

ASSESSMENT AND EXAMINATIONS

Sr. No.	Elements	Weightage	Details
1.	Mid Term Assessment	35%	It takes place at the mid-point of the semester
2.	Formative Assessment	25%	It is continuous assessment. It includes: classroom participation, attendance, assignments and presentation, homework, attitude and behavior, hands-on-activities, short tests, quizzes etc.
3.	Final Assessment	40%	It takes place at the end of the semester. It is mostly in the form of a test, but owing to the nature of the course the teacher may assess their students based on term

			paper, research proposal development, field work and report writing etc.
--	--	--	--

Books Recommended

1. Introduction to Geochemistry by Krauskopf, K.B, 1967, McGraw Hill
2. Principles of Geochemistry by Mason B., 1966, John Wiley & Sons.
3. Geochemistry in Mineral Exploration by Rose, A.W., Hawkes, H.H. & Webb, J.S, 1983, Whitstable Litho Ltd.,
4. Inorganic Geochemistry by Henderson, P., 1982, Pergmon Press Ltd.
5. Geochemistry by Brownlow, A.H., 1996, Prentice Hall.
6. Geochemistry by Beaumont, E.A., & Foster, N.H., 1988, AAPG special Bull, Publication No.