Course Type	Course Code	Name of Course	L	T	P	Credit
DP	NGLC505	**Mineralogy and Geochemistry Practical**	0	0	1	0.5

Course Objective
The primary objective of the course is to train students in identifying common rock forming minerals.
Learning Outcomes
Upon completion of the course, students will be able to: • Physical identification common rock-forming silicate minerals in hand specimen • Physical identification common rock-forming accessory minerals in hand specimen • Preparation of sample different types of sample solution by geochemical analysis • Wet chemistry for determination elemental concentrations in rocks • How to represent geochemical data

Unit No.	Topics to be Covered	Lecture Hours	Learning Outcome
	Mineralogy		
1.	Identification of minerals: Common silicate minerals and their characteristic property under microscope- Olivine, Orthopyroxene, Clinopyroxene, Amphibole group, Mica Groups, Feldspar Group, Quartz	4	Physical identification common rock-forming silicate minerals in hand specimen
2.	Identification of minerals: Common accessory minerals and other important minerals Silicate Structure characteristic property under microscope- Sphene, Zircon, Monazite, Epidote, Scapolite, Staurolite, Al2SiO5 polymorphs, Tourmaline etc.	3	Physical identification common rock-forming accessory minerals in hand specimen
	Geochemistry		
3.	Sample preparation methods (Destructive and non-destructive), A- solution and B- Solution preparation	2	Preparation of sample different types of sample solution by geochemical analysis.
4.	Wet chemical analyses and titrimetric analyses of major and some trace elements	2	Wet chemistry for determination elemental concentrations in rocks
5.	Data presentation and associated problems.	2	How to represent geochemical data
6.	Practical examination	1	
	Total	14	

Reference Books:

1. Introduction to Mineralogy by William D. N., 2000, Oxford University Press.
2. Potts P.J. (1987) A handbook of silicate rock analysis; Blackie

Other References:

3. Manual of Mineralogy (Revised) by Klein C., Hurlbut C. S. Jr., 1985, John Wiley & Sons
4. Rollinson H.R. (1993) Using geochemical data: evaluation, presentation, interpretation; Prentice Hall publication.