Course Type	Course Code	Name of Course	L	T	P	Credit
DP	NGLC524	Igneous Petrology Practical	0	0	2	1

Course Objective
The primary objective of the course is also to train students in identifying different metamorphic texture and using that information to build up the geological history of the rock.
Learning Outcomes
Upon completion of the course, students will be able to: • Explaining reasons for development of specific texture in the rock. • Understand effect of composition and physical condition on occurrence of metamorphic mineral. • Building up geological history of a rock by integration of information gathered from microstructures.

Unit No.	Topics to be Covered	Lecture Hours	Learning Outcome
1.	Textures of Igneous Rocks.	4	Learn about the textures of igneous rocks
2.	Exercises on Crystal Fractionation of Igneous Rock Suites.	4	Familiarise with the exercises on crystal fractionation
3.	Exercises on Partial Melting of Igneous Rock Suites.	4	Familiarise with the exercises on partial melting
4.	Exercises on the construction and interpretation of Spider diagrams of N-type MORBs, E-type MORBs, OIBs etc.	4	Familiarise with the exercises on spider diagrams
5.	Thin Section study of acid, basic and ultramafic rocks.	10	Learn thin section studies of igneous rocks under the microscope
6.	Practical examination	2	
	Total Classes	28	

Text Books:

1. Philpotts, A.R., 2003. Petrography of Igneous and Metamorphic Rocks, Waveland press, Prospect Heights; 178 p.

Reference Books:

1. Philpotts, A.R., Ague, J.J., 2009. Principles of Igneous and Metamorphic Petrology, Cambridge University Press, New York; 684 p.
2. Cox, K.G., Bell, J.D., Pankhurst, R.J., 1993. The Interpretation of Igneous Rocks, Chapman and Hall, London; 450 p.
3. Gill, R., 2010. Igneous Rocks and Processes: A Practical Guide, Wiley-Blackwell, Oxford; 428 p.