Course Type	Course Code	Name of the Course	L	T	P	Credits
DSC	NGLC102	**Earth System and Processes Practical**	0	0	2	1

Course Objective
Introduce the student to Earth as a system i.e. rocks, minerals and the various geological/geomorphological processes that continue to shape the planet as a whole.
Learning Outcomes
1. Understand the Earth as a system in different scales. 2. Understand fundamental concepts of rocks/minerals concepts principles that govern earth processes. 3. Understand the interactions between the surface and subsurface processes and their impact on the planet.

Unit No.	Topics to be Covered	Lecture Hours	Learning Outcome
1.	Study of the physical properties of rocks on the basis of their mineralogy, textures and structures.	2	Learn about the various physical properties of rocks.
2.	Rocks identification on the basis of their mineralogy, textures and structures.	4	Learn to identify the different types of igneous, sedimentary & metamorphic rocks.
3	Study of the physical properties of the rock forming minerals.	2	Learn about the various physical properties of rock forming minerals.
4	Identification of the rock forming minerals.	4	Learn to identify the various types of rock forming minerals.
5	Identification of various kinds of fossils.	2	Learn to identify the various kinds of fossils.
6.	Preparation of contour maps from the given control points.	2	Learn to make the contour maps from the given control points.
7.	Study and interpretation of contour maps for the identification of various kinds of topographic features.	2	Learns to identify various types of topographic features from contour maps.
8.	Preparation of profile section from the contour maps.	2	Learn to make profile section to understand the topography.
9.	Introduction of geological maps and preparation of geological section along the given profile.	2	Learn to interpret the geological maps on the basis of geological section
10	Determination of true/apparent dip and strike of a geological formation.	4	Learn to calculate the dip and strike of beds from geological maps.

Reference Books:

1. Practical approach to crystallography and mineralogy, R. N. Hota (2011), CBS Pub. & Dist., New Delhi.
2. Raith, M. M., Raase, P. R., & Reinhardt, J. R. (2011). Guide to thin section microscopy. University of Bonn.
3. Bloss, F. D. (1971). Crystallography and crystal chemistry.
4. Nesse, W. D. (2012). Introduction to mineralogy. Oxford Univ. Press.
5. Sen, A.K. (1995), Laboratory Manual of Geology, Modern Book Agency, Calcutta.
6. Gokhale, N. W. (1991). A Manual of Problems in Structural Geology. CBS Pub.