Course Type	Course Code	Name of Course	L	T	P	Credit
DC	NGLC518	**GEOMORPHOLOGY**	3	0	0	3

Course Objective
The primary objective of the course is to introduce fundamental and applied aspects of geomorphology such as origin, evolution, maintenance and destruction of landforms, their link with tectonics and climate and their applications in flood control, landslides, transport engineering and others.
Learning Outcomes
Upon completion of the course, students will be able to: • Geomorphology as an important earth process that links landform development with climate, tectonics, sedimentary deposits, igneous activity and extra-terrestrial events • Quantitatively analyze landforms and landscapes • Application of geomorphology in Engineering and environmental problems

Unit No.	Topics to be Covered	Lecture Hours	Learning Outcome
1	Introduction to Geomorphology	2	Understand the overview of Geomorphology
2	Methods of Geomorphic investigations	2	Knowledge on the methods on landscape analysis
3	Physical, Chemical and Biological processes in weathering	7	Understand the controls on weathering of rocks
4	Structural and lithological controls on landforms and drainage patterns	5	You can express queries using SQL.
5	Depositional and Erosional landforms : Fluvial, Aeolian, Glacial and Marine	10	Understand the controls on landform and drainage development
6	Morphometric analysis of landforms	7	Understand the quantitative analysis of geomorphic landforms
7	Impact of climate on geomorphology	3	Learning the relation between Tectonics, climate and landform development
8	Applications of Geomorphology in environmental and engineering problems	3	Apply the concepts of geomorphic studies in engineering and environmental problems
9	Neotectonics and geomorphology	3	Evaluate geomorphic signatures for recent and ongoing crustal movements
	Total	**42**	

Text Books:

1. Thornbury, W.D. 1969: Principles of Geomorphology 2nd edition, W.D. John Wiley & Sons. 594p.
2. Bloom, Arthur H. 2004: Geomorphology – a systematic analysis of Late Cenozoic landforms Prentice Hall, 482 p

Reference Books:

1. Tricart, J. 1974: Structural Geomorphology. Longman Publishers, 305p
2. Butzer, Karl W. 1978: Geomorphology from the Earth, Harper & Row International Edition, 463p.
3. Allison R.J. 2002: Applied Geomorphology. Wiley International. 568p.