Name of Programme: M. Sc. Applied Geology
Course Code: GEO-630
Title of the Course: Geomorphology
No of Credits: 03
Effective from AY: 2023-24

Prerequisites for the course	Students should have undergone M.Sc. Semester I and II.	
Course objectives	This course provides an overview of landforms, geological processes, and landscape evolution and geomorphology thus generated.	
Content	**Module 1** Introduction to Geomorphology ; Types of weathering, Weathering Processes and Landforms; Erosional processes, Mass Wasting Processes and Landforms. Role of geology in geomorphology.	15 hours
	Module 2 Fluvial processes and landforms; Aeolian processes and landscapes; evidences of aeolian processes on Mars. Geomorphology of karstic landscapes; tectonic Geomorphology; volcanoes, impact craters, folds, and fault. Coastal Processes and Landforms. Glaciers and glacial processes; and landforms. Periglacial processes and landforms.	15 hours
	Module 3 Dating methods, and establishing timeline in the landscape: Radiometric dating methods Applied Geomorphology: Geomorphological controls on Dam site selection and coastal management.	15 hours
Pedagogy	Lectures/ tutorials/assignments/field study/discussion	
References/ Readings	1. Ahmad, E. (1972). Coastal geomorphology of India. *Coastal geomorphology of India.* 2. Anderson, R. S., & Anderson, S. P. (2010). *Geomorphology: the mechanics and chemistry of landscapes*. Cambridge University Press. 3. Coates, D. R. (2020). Geomorphic engineering. In *Geomorphology and Engineering* (pp. 3-21). Routledge. 4. Thornbury, W. D. (2018). *Principles of geomorphology*. New Age	

	International. 5. Trudgill, S. (1985). *Limestone geomorphology*. Prentice Hall Press.
Course Outcomes:	1. Students will be able to identify various geological processes. 2. They will understand the process of landscape evolution and geomorphology generated.. 3. They will be able to identify various landforms. 4. Use of natural geomorphology site selection for engineering projects.