



GEOMORPHOLOGY

PROF. PITAMBAR PATI

Department of Earth Sciences
IIT Roorkee

TYPE OF COURSE : Rerun | Core | PG

COURSE DURATION : 12 weeks (24 Jan' 22 - 15 Apr' 22)

EXAM DATE : 24 Apr 2022

PRE-REQUISITES : Engineering Geology (preferable) Engineering Mechanics (Compulsory)

INTENDED AUDIENCE : Civil Engineering

INDUSTRIES APPLICABLE TO : All companies that deals with Civil infrastructure development

COURSE OUTLINE :

Geomorphology deals with the activities of different natural surface and subsurface agents engaged in removal of old and formation of new landforms on the earth's surface. In modern days geomorphic evaluation of each and every area is utmost important for sustainable development. It helps in many fields such as groundwater exploration and storage, flood control, waste disposal, smart city development, oil and natural gas exploration, infrastructure development etc.

ABOUT INSTRUCTOR :

Prof. Pitambar Pati completed his Ph.D in 2008 from IIT Roorkee and working as a geologist in Geological Survey on India up to 2012. He has five years of industrial work experience in Geological Survey of India and more than six years of teaching experience as assistant professor of this institute since 2013. The instructor is working as Associate Professor in the Department of Earth Sciences in IIT Roorkee at present. The instructor was shortlisted among the outstanding teachers list of the institute in 2018 in PG level.

COURSE PLAN :

Week 1: Introduction to Geomorphology

Week 2: Weathering

Week 3: Mass wasting processes – classification and hillslope evolution

Week 4: Fluvial Geomorphology

Week 5: Desert Geomorphology

Week 6: Glacial Geomorphology

Week 7: Coastal geomorphology

Week 8: Tectonic Geomorphology

Week 9: Seismic Geomorphology

Week 10: Exploration geomorphology

Week 11: Engineering geomorphology

Week 12: Geomorphological mapping