

SRI VENKATESWARA UNIVERSITY - TIRUPATI

III SEMESTER – W.E.F. – 2023-24

GEOMORPHOLOGY (MINOR)

COURSE OBJECTIVES:

- ✓ To introduce the basic concepts geomorphology to the students of geography
- ✓ To understand the origin of landforms, Weathering, Erosion and Depositional
- ✓ To know the applications of geomorphology is helpful in different fields like Civil, mineral and coastal departments.

Course Outcome:

On the completion of syllabus students must be able to:

- ✓ Describe the morphology of the landscape and related processes in areas influenced by fluvial, glacial, periglacial, aeolian, coastal, and arid systems.
- ✓ Describe major scientific ideas and theories about the development of the landscape.
- ✓ Critically analyse geomorphological issues in a scientific context at local, regional and global scales.
- ✓ Identify the major landforms on the Earth's surface and interpret the processes responsible for their genesis.

UNIT – I

BASICS: Meaning, nature, Scope, and development – Basic Concepts, Branches in geomorphology – geological time scale – Endogenic process: Diastrophism and volcanism

UNIT – II

EXOGENIC PROCESS: Weathering –Physical – Chemical – biological (landforms) - Mass Wasting, Drainage: Drainage Patterns - Consequent Drainage, Obsequent Drainage, Antecedent Drainage, Superimposed Drainage – Lakes: Origin – Types

UNIT – III

CONCEPTS: Morphogenetic regions – Concept of cycle of erosion: Davis, Penck - Peneplain and Pediplain –Slope: definition - elements.

UNIT – IV

LANDFORMS: Fluvial, Karst, Glacial (Erosional and Depositional).

UNIT – V

LANDFORMS: Aeolian and Coastal landforms (Erosional and Depositional).

REFERENCES:

1. Dayal, P., (1990). A Text book Geomorphology, Shukla Book Depot, Patna,India.
2. MajidHussain. ed., (1994). Geomorphology, Perspective in Physical Geographyseries, Anmol Publications Pvt. Ltd., New Delhi.
3. Mukerjee, P.K., (1986). A Text of Geology, The World Press (P) limited, Calcutta.
4. 4. Pitty,A.F., (1982). The Nature of Geomorphology, Methuen and Co. Ltd., London.
5. 5. Rice, R.J., (1986). Fundamentals of Geomorphology, Longman, London.
6. Small, R.J., (1978). The Study of Landforms: A Text book of Geomorphology, Cambridge University Press, New York.
7. Thornbury, W.D., (1954). Principles of Geomorphology, John Wiley and sons, Inc., New York.
8. Worcester, P.G., (1948). A Textbook of Geomorphology, Von Nostrand Reinhold, Company, New York.

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III SEMESTER

PRACTICAL - TERRAIN ANALYSIS (MINOR)

Course Objective

- ✓ To apprise the students about the Terrain mapping techniques.
- ✓ To project the representation of the landforms by using contour lines.
- ✓ To explain the methods of slope analysis.

Course Outcomes

After the completion of the course, Students will be able to

- ✓ Students can able to represent the landforms with contour lines.
- ✓ Student can perform profiles which are drawn from landforms through contours.
- ✓ Student can represent the slope analysis models.

Ex: 1 Interpolation of contours.

Ex: 2 Landforms represented by contours.

Ex: 3 Profiles: Serial, Superimposed, Projected,

Composite. Ex: 4 Slope Analysis: Smith's Method.

Ex: 5 Slope Analysis: Wentworth's Method.

References:

1. Misra, R.P. and Ramesh, A.: Fundamentals of Cartography, concept, New Delhi, 1989.
2. Monkhouse, F.J .H.R. and Wilkinson: Maps and diagrams; Methuen and Co., London, 1984.
3. Peter Toyne & Peter Newby, T.: Techniques in human geography; MacMillan, London, 1972.
4. John Byogott: An introduction to map work and practical geography, university Tutorial press Ltd., London.