

SEMESTER-VII

GROUP-II SPECIALIZATION IN PHYSICAL GEOGRAPHY (Elective Courses)

GEOG. 628: TECHNIQUES IN GEOMORPHOLOGY 3(3-0)

Course Objectives

To develop student's working knowledge and skills in landform recognition, topographic contouring, topographic profiles, field surveying, mapping and lab techniques.

Learning Outcomes

Students-are expected to conduct geomorphologic research by applying the techniques to geomorphic problems, to attain confidence and interpret the results.

Course Outline

1. Introduction

- Nature, scope and status

2. Methods of Research and Analysis

- Field Techniques: Observations of Forms and Characters.
 - i. Slope form
 - ii. Morphological mapping
 - iii. Data sources for mapping
 - iv. Geomorphologic Field mapping
- Observation of Surface Deposits/ Sectional studies.
- Observation of processes in action: Fluvial, glacial, mass movement, wind action and earth movement.

3. Cartographic and Morphometric Analysis

- Profiles
- Generalized contours
- Slope maps
- Aerial photography/Application of Remote Sensing in Geomorphology

4. Sediment Analysis

- Size of sediment
- Shape of sediment
- Chemical analysis and dating methods
- Fabric analysis
- Lithological analysis.

Field Visits

Hanna Aurak River, Bolan River, Ziarat Mountain and areas of physical features as recommended by the respective subject teacher.

Recommended Books

1. King, C.A.M (2005) "Techniques in Geomorphology", London.
2. Bryn Hub bard, Neil F. Glasser (2005) "Field Techniques in Glaciology and Glacial Geomorphology", WHey, John & Sons, Incorporated
3. Dikau R., Brunsdn D., Scott L. & Ibsen M.L. (eds.) (1997) "Landslide Recognition: Identification, Movement and Causes", John Willy & Sons.

4. Selby M.J. (1993) "Hill slope, Materials and Processes", Oxford University Press.
5. Andrew Goudie (1990) "Geomorphological Techniques", Routledge.
6. Briggs, D. (1977) "Sources and Methods in Geography Sediments", UK.
7. Leopold, L.B et. Al. (1964) "Fluvial Processes in Geomorphology", New York.
8. King, L.C. (1962) "The Morphology of the East", UK.
9. Blench, T (1957) "Regime Behaviour of Canals and Rivers", London