

SRI VENKATESWARA UNIVERSITY - TIRUPATI

III SEMESTER

	Theory	Practical
5	Major 5 : Geomorphology	Terrain Analysis
6	Major 6 : Climatology and Oceanography	Climate Analysis
7	Major 7 : Human Geography	Thematic Mapping
8	Major 8 : Geographical Thought	Basic Statistics

SRI VENKATESWARA UNIVERSITY - TIRUPATI
III SEMESTER
MAJOR -5: GEOMORPHOLOGY

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

Major -6: CLIMATOLOGY AND OCEANOGRAPHY

Course objective:

Acquiring knowledge on Climate and Oceans.

Course Outcome:

On the completion of syllabus students must be able to: Appreciate the climate phenomena and oceanic resources

UNIT I

Nature and scope of climatology. Composition and structure of the Atmosphere – Insolation – heat balance, green house effect – vertical and horizontal distribution of Temperature.

UNIT II

Atmospheric Pressure – Pressure belts – Vertical and Horizontal distribution of pressure- Atmospheric Motion – Forces controlling Atmospheric Motion – Primary, Secondary and Tertiary Circulations.

UNIT III

Atmospheric Humidity – Evaporation – Condensation and Precipitation Types and Forms. Clouds– Types and Properties. Climatic Classification – Koppen's and Thornthwaites.

UNIT IV

Nature and scope of Oceanography–Distribution of Land and water. Bathymetric relief features. Distribution of Temperature and Salinity – Vertical and Horizontal

UNIT V

Ocean Movements –Waves, Tides and Currents. Distribution of Ocean Currents - Atlantic, Pacific and Indian Ocean. Coral reefs, Ocean Deposits and Marine Resources.

REFERENCES:

1. Crittch Field, J.H.: General Chimatology, Prentice Hall, India, New Delhi, 1993.
2. Lal, D.S.: Climatology, Chaitanya Publishing House, Allahabad, 1986.
3. Garrison, T.: Oceanography – An introduction to Marine Science.Books / Cole, Pacific Groue, USA, 2001.
4. Sharma &Vatal : Oceanography for Geographers Chaitanya Publishing House, Allahabad.
5. Lal.D.S. Oceanography, chaitanya Publishing House, Allahabad,1994

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III SEMESTER

Major -7: HUMAN GEOGRAPHY

Course Objectives:

To learn about 1) Spatial distribution of race, 2) Human adaptation of environment, 3) Classification of Natural resources, 4) World population density, population growth 5) Rural settlements.

Course Outcome

After completion of the paper student will learn about the Human race spatial distribution, adaptation of environment, world population density, population growth and Rural settlements.

UNIT-I

Nature scope and Historical development of Human Geography. Division of Mankind: Spatial distribution of race and tribes of India.

UNIT-II

Human adaptation to the environment (i) Cold region — Eskimo (ii) Hot region-Bushman (iii) Plateau — Gonds (iv) Mountains — Gujjars.

UNIT-III

Meaning, nature and components of resources; Classification of resources — renewal and non- renewable; biotic and abiotic, recyclable and non-recyclable.

UNIT-IV

Distribution and density of world population, population growth, fertility and mortality Patterns. Concept of over, under and optimum population; Population theories: Malthus.

UNIT-V

Rural settlements: Meaning, classification and types. Urban settlements: Origin, Classification. Population pressure, resource use and environment degradation;

REFERENCES

1. Alexander, John. W.: Economic Geography, Prentice Hall of India Ltd., New Delhi, 1988
2. Carr, M. Patterns: Process and Change in Human Geography, McMillan Education, London, 1987.
3. Chandna, R.C.: A Geography of Population: Concepts, Determinants and Patterns, Kalyani Publishers, New Delhi, 1986.
4. DeBlij, H. J.: Human Geography, Culture, Society and Space, John Wiley, New York, 1996.
5. Fellman, J.L.: Human Geography-Landscapes of Human Activities, Brown and Benchmark Pub., USA, 1997.
6. McBride, P.J. Human Geography; Systems Patterns and Change, Nelson. UK and Canada, 1996.
7. Michael, Can: New Patterns: Process and Change in Human Geography, Nelson, 19

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III SEMESTER

MAJOR –8: GEOGRAPHICAL THOUGHT

Course Objective

- ✓ To acquaint the students with the Geographical philosophy, Methodology and historical development of geography as a professional field.
- ✓ The idea is to address the spirit and purpose of the changing geographies and to what we as geographers contribute towards knowledge production.
- ✓ To developing critical thinking and analytical approaches and Students will acquire an understanding of and appreciation for the contributions of the eminent geographers to the subject.
- ✓ To provide the knowledge on the quantitative revolution in the geographical studies.

Course Outcomes

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

- ✓ Understand the evolution of geography over the decades.
- ✓ Students will demonstrate an advanced understanding of the historical development of geographical studies.
- ✓ They can understand the major current philosophical and theoretical debates in geography.
- ✓ Students will demonstrate an understanding of current research within the breadth of geography, as well as more in depth knowledge of research in their specialty areas.
- ✓ Students will develop a solid understanding of the concepts of “space,” “place” and “region” and their importance in explaining world affairs.
- ✓ Improve knowledge on the quantitative revolution in the geographical studies.

UNIT – I

Contributions of Greeks and Romans to Ancient Geography – Contributions of Arab Geographers.

UNIT-II

The Founders of Modern Geography – Humboldt and Ritter. German and French contributions to Modern Geography. Contributions of Indian Geographers.

UNIT-III

Areal Differentiation, Landscape, Schools of Thought.

UNIT-IV

Dualism and Dichotomy in Geography- Physical and Human Geography – Environmental Determinism and Possibilism – Systematic and Regional Geography.

UNIT -V

Quantitative and Behavioral approaches in Geography. Models in Geography. Changing concept of Space in Geography, Future of Geography.

References:

1. Dikshit, R.D. (ed.): The Art& ScienceofGeography – Integrated Readings, Prentice Hall of India, New Delhi,1994.
2. Hartshome, R.: Perspective on nature of Geography, Rand McNally& Co., 1959.
3. Husain, M.: Evolution of Geographic thought, RawatPub., Jaipur,1984.
4. Minshull, R.: The Changing nature of Geography, HutchinsonUniversity Library, London,1970.

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III SEMESTER

MAJOR 5-PRACTICAL - TERRAIN ANALYSIS

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.

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III SEMESTER

MAJOR-6-PRACTICAL - CLIMATE ANALYSIS

Course Objective

- ✓ To apprise the students about the Climate Analysis.
- ✓ To project the representation of the factors of climate.

Course Outcome

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

- ✓ Students can able to represent the climatic factors.
 - ✓ Student can measure weather phenomena.
1. Graphs – Climograph, Hyther graph and Ergo graph.
 2. Water Balance Techniques – Moisture Adequacy Index– Aridity Index – Humidity Index – Moisture Index and Water Balance Graph.
 3. Rainfall Analysis – Mean Rainfall – Rainfall Intensity – Rainfall variability and Rainfall Ratio.

REFERENCES:

1. Bygott, John (1967): An Introduction to Map Work and Practical Geography, University Tutorials.
2. Monkhouse, F.J. and Wilkinson, H.R. (1968): Maps and Diagrams Methuen, London.
3. Singh, R.L. (1979): Elements of Practical Geography, Kalyani Publishers, New Delhi.
4. Bygott, J. and Money, D.C. (1969): An Introduction to Map Work and Practical Geography, University Tutorial Press.
5. Subramanyam, V.P. (1982): Water Balance and its applications, Andhra University Press, Vishakhapatnam.
6. Gopal Singh (1996): Map Work and Practical Geography, Vikas Publishing House, New Delhi.
7. Asish Sarkar, Practical Geography - A Systematic Approach, Orient Longman 1997

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MAJOR-7-PRACTICAL - THEMATIC MAPPING

Course Objective

- ✓ To develop the knowledge on the thematic maps.
- ✓ To understand the data representation through the diagrammatic form and log graphs.

Course Outcomes

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

- ✓ understand how to represent the data through different Themes

Ex: 1 Dot method

Ex: 2 Isopleth and Isochromatic methods

Ex: 3 ChoroplethMethod

Ex: 4 Choro-Chromaticmethod

Ex: 5 Flowmethod.

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 New by, T.: Techniques in human geography; MacMillan, London,1972.
4. John Byogott: An introduction to map work and practical geography, university Tutorial press Ltd., London.

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MAJOR-8 PRACTICAL – BASIC STATISTICS

Course objectives

- ✓ To provide an understanding for the student on statistical concepts to include measurements of location and dispersion, and correlation analysis.
- ✓ To calculate and apply measures of location and measures of dispersion - grouped and ungrouped data cases.

Course outcomes:

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

- ✓ Keeping in view the nature of data and purpose of study and to make a rational choice amongst listed various statistical methods.
- ✓ Students shall know how to organize, manage, and present data.

Ex:1 Frequency Distribution,

Ex:2 Measures of Central Tendency; Arithmetic Mean, Median, Mode.

Ex:3 Measures of dispersion: Mean deviation, Quartile deviation, Standard deviation,

Ex:4 Correlation-Rank Correlation.

Ex:5 Graphical Representation: Histogram, Ogive curve

REFERENCES:

1. Aslam Mahmood – Statistical Methods in Geographical Studies, Publication, New Delhi, 1977.
2. Cole, J.P. & King, D.A. Quantitative Methods in Geography, John Wiley and Sons, New York, 1968.
3. Gregory, K.J. and Walling, D.E. Drainage basins: form and process: A Geomorphologic approach; Arnold; London 1973.
4. Peter Davis: Science in geography, Science Series-3, Data description and presentation, Oxford University Press, London, 1975.
5. Peter Toyne and Peter Newby, T.: Techniques in Human Geography, MacMillan, London, 1972.
6. Singh Jasbir and Dhillon, S.S.: Agricultural geography, TATA McGraw Hill, New Delhi, 1984.
7. Singh, R.L. Map work and practical geography, central book depot, Allahabad, 1972.
8. Singh, R.L. Elements of Practical Geography, Kalyani Publishers, 1992.
9. Toyni, P. and Newby, Techniques of Map, Longman, London, 1965.