

DEGREE SYLLABUS  
FOR SEMESTER SYSTEM  
**GEOGRAPHY**  
B.A./B.Sc. (*PASS & HONOURS*)

**ACADEMIC SESSION 2012-**



DEPARTMENT OF GEOGRAPHY  
**NAGALAND UNIVERSITY**  
LUMAMI

**PROPOSED COURSE OUTLINE FOR B.A./ B.Sc. SEMESTER SYSTEM  
DEPARTMENT OF GEOGRAPHY  
NAGALAND UNIVERSITY**

Semester	I (Code/Paper)	II (Code/Paper)	III (Code/Paper)	IV (Code/Paper)	V (Code/Paper)	VI (Code/Paper)	Total Credit
Theory (P & H)	GEOG-101/ (Physical basis of Geography)	GEOG-201/ (Climatology & Oceanography)	GEOG-301/ Human Geography	GEOG-401/ Economic Geography	GEOG-501/ Regional Geography of India	GEOG-601/ Regional Geography of North East India	
Credit/CH*	4/ 60	4/ 60	4/ 60	4/ 60	4/ 60	4/ 60	24
Practical (P & H)	GEOG-102/ Practical	GEOG-202/ Practical	GEOG-302/ Practical	GEOG-402/ Practical	GEOG-502/ Practical	GEOG-602/ Practical	
Credit/CH*	1/ 30	1/ 30	1/ 30	1/ 30	1/ 30	1/ 30	6
Theory (H)	GEOG-103/ Geographical Thought	GEOG-203/ Regional Geography of World	GEOG-303/ Political Geography	GEOG-403/ Advanced Geomorphology	GEOG-503/ Applied and Resource Management	GEOG-603/ Environment and Disaster Management	
Credit/CH*	3/ 45	3/ 45	3/ 45	3/ 45	3/ 45	3/ 45	18
Practical (H)	GEOG-104/ Practical	GEOG-204/ Practical	GEOG-304/ Practical	GEOG-404/ Practical	GEOG-504/ Practical	GEOG-604/ Project	
Credit/CH*	1/ 30	1/ 30	1/ 30	1/ 30	1/ 30	1/ 30	6

\*Abbreviation: P & H = Pass & Honours, H= Honours

\*CH = Contact Hours

Each semester would be of 90 working days

Credit=Contact Hours per week (double for practical)

SEMESTER -I  
(Pass and Honours)  
GEOG-101/ PAPER –I  
Physical basis of Geography -I

Contact Hours: 60

**Objectives:**

The objective of this course is to introduce students to physical geography, in a brief but adequate manner, and to enlighten the students on career opportunities for geographers.

- Unit –I Nature and scope of Physical Geography, Branches of Physical Geography and their interrelations; Linkages of geography with physical sciences and social sciences like geology, biology, economics and sociology.
- Unit –II Origin of Solar System and Earth (Tidal Hypothesis of Jeans and Jeffrey, Gaseous Theory by Kant, Nebular Hypothesis of Laplace and Big-Bang Theory).
- Unit –III Major landforms: Mountains, Plateau and Plains;  
Forces affecting earth's crust (endogenetic and exogenetic forces).
- Unit –IV Origin, composition and types of rocks, Soil profile: Processes of soil formation and soil types.
- Unit –V Meaning and Scope of Biogeography,  
Ecosystem: Components and functioning, factors influencing plant growth  
Major Biomes of the world.

**Books Recommended**

1. Bryant, H. Richard (2001): Physical Geography Made Simple, Rupa and Company. New Delhi
2. Bunnett, R.B. (2003): Physical Geography in Diagrams, Fourth GCSE edition, Pearson Education (Singapore) Private Ltd.
3. Garrison, T. (1998): Oceanography, Wordsworth Company, Belmont.
4. Lake, P. (1979): Physical Geography, Cambridge University Press, Cambridge.
5. Leong Goh Cheng (2003): Certificate Physical and Human Geography, Oxford University Press, New Delhi.
6. Monkhouse, F.J. (1979): Physical Geography. Methuen, London
7. Singh, S. (2003): Physical Geography. Prayag Pustak Bhawan, Allahabad;
8. Strahler, A.N. and Stahler, A.M. (1992): Modern Physical Geography. John Wiley and Sons, New York.

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SEMESTER -I  
(Pass and Honours)  
GEOG-102/ Practical

Contact Hours: 30

- Unit –I a) Types of scale; preparation of scale: simple, comparative and diagonal;  
b) Enlargement and Reduction of map by graphical method.
- Unit –II Interpretation of Toposheet: Topography (relief, plain, plateau, mountain etc.),  
Drainage (pattern)
- Unit –III Representation of different landforms and their profile (Cliff, Oxbow lake,  
Waterfall, Ria Coast, Fjord Coast, Cirque, Meander, River terrace)
- Unit –IV Viva voce and Practical Note book.

**Books Recommended**

1. Mishra, R.P. and Ramesh A. (1989): Fundamentals of Cartography, Concept Publishing Company, New Delhi.
2. Sarkar, A. K. (1997): Practical Geography: A Systematic Approach. Orient Longman, Kolkata.
3. Singh, L.R. (2006): Fundamentals of Practical Geography, Sharda Pustak Bhawan, Allahabad.
4. Singh, R.L. and Singh, Rana P.B. (1993): Elements of Practical Geography. Kalyani Publishers, New Delhi.

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SEMESTER -I  
(Honours)  
GEOG-103/ Geographical Thought

Contact Hours: 45

**Objectives:**

To introduce the students to the philosophical and methodological foundations of the subject and to its place in the world of knowledge. To familiarize them with the major landmarks in development of geographic thought at different periods of time.

- Unit –I      Classical geography –contributions of Greeks (Herodotus, Eratosthenes), Romans (Strabo, Ptolemy) and Indian geographers.  
                 Medieval geography –Arab Geographers (Al-Masudi, Ibn-Batuta)
- Unit –II      Impact of Exploration and Inventions.  
                 Geography in the classification of science –Immanuel Kant.
- Unit –III     Dichotomies in geography: Determinism vs. Possibilism.  
                 Physical vs. Human Geography
- Unit –IV     Founders of modern geographical thought: Alexander Von Humboldt and Carl Ritter.  
                 Contribution of geographers: Vidal de Lablache and Elisee Reclus
- Unit –V      Concept of geography:  
                 (a) Geography as an earth science  
                 (b) Geography as the study of Landscape both physical and cultural  
                 (c) Geography as a science of distribution

**Books Recommended**

1. Ali, S.M. (1960): Arab Geography, Institute of Islamic Studies, Aligarh Muslim University, Aligarh, First Edition.
2. Ali, S.M. (1983): The Geography of Puranas, People's Publishing House, New Delhi, Third Edition
3. Diddee, J. (ed.) (1990): Indian Geography, Institute of Indian Geographers, Pune, first edition.
4. Dikshit, R. D. (2003): Geographical Thought. A Critical History of Ideas. Prentice-Hall of India, New Delhi.
5. Husain, M. (2002): Evolution of Geographical Thought, Rawat Publications, Jaipur.

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SEMESTER -I  
(Honours)  
GEOG-104/ Practical

Contact Hours: 30

- Unit –I      a) The nature and scope of cartography, development trend, traditional versus modern Cartography.

- b) The Earth: shape, size, area, coordinate system: latitude and longitude; concept of Great circle and Small circle; direction and distance; concept of scale and spatial resolution;

Unit –II Combination of Maps from different scale.

Unit –III Preparation of profiles from Toposheet: Serial, Superimposed, Projected and composite profiles.

Unit –IV Viva voce and Practical note book.

**Books Recommended**

1. Mishra, R.P. and Ramesh A. (1989): Fundamentals of Cartography, Concept Publishing Company, New Delhi.
2. Sarkar, A. K. (1997): Practical Geography: A Systematic Approach. Orient Longman, Kolkata.
3. Singh, L.R. (2006): Fundamentals of Practical Geography, Sharda Pustak Bhawan, Allahabad.
4. Singh, R.L. and Singh, Rana P.B. (1993): Elements of Practical Geography. Kalyani Publishers, New Delhi.

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SEMESTER -II  
(Pass and Honours)  
GEOG-201/Physical Geography –II

Contact Hours: 60

**Objectives:**

This paper on physical geography is structured into components of climatology and oceanography as these are closely interrelated. Course content leads to the identification of climatic differentiation on the earth, and the consequences of human activities on the atmospheric processes.

Section –I (Climatology)

Unit –I Definition and significance of climatology; elements of weather and climate; Composition and structure of atmosphere; Insolation and Heat budget.

Unit -II Vertical and Horizontal distribution of temperature; Pressure and Pressure belts; Winds: Planetary periodic and Local winds; jet streams; Air masses and fronts; temperate and tropical Cyclones.

Unit –III Major climatic types (Koppen’s and Thornthwaite’s classification of world climate); Global Climate change; role and response of man in climatic changes.

Section –II (Oceanography)

Unit –IV Surface configuration of the ocean floor, continental shelf, continental slope, abyssal plain, mid-oceanic and oceanic trenches

Movement of Ocean Water: waves, tides and currents

Unit –V Marine deposits and coral reefs, Distribution of temperature and salinity of oceans and seas.

**Books Recommended**

1. Chorley, R.J. (2001): Atmosphere, Weather and Climate. Methuen, London.
2. Critchfield, H.J. (2002): General Climatology. Prentice-Hall of India, New Delhi.
3. Finch, J. C. and Trewartha, G. T.: Elements of Weather and Climate. Prentice-Hall, London.
4. Lal, D.S.(1986): Climatology. Chaitanya Publications, Allahabad.
5. Oliver, J.E. and Hidore, J.J. (2003): Climatology: An Atmospheric Science, Pearson Education Private Ltd, Delhi.
6. Singh, S. (2005): Climatology. Prayag Pustak Bhawan, Allahabad.

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SEMESTER -II  
(Pass and Honours)  
GEOG-202/ Practical

Contact Hours: 30

- Unit –I      a) Handling and use of weather instruments (Max-Min thermometer, Hygrometer, Barometer, Rain gauge, Anemometer).  
                  b) Interpretation of weather maps published by Indian Meteorological Department.
- Unit –II      Representation of weather data: Temperature, rainfall and humidity data by line and bar graph. Construction and significance of Hythergraph and Climograph.
- Unit –III     Hypsometric and Bathymetric curve.
- Unit –IV     Viva voce and Practical Note book

**Books Recommended**

1. Monkhouse, F. J. and Wilkinson, F.J. (1985): Maps and Diagrams. Methuen, London.
2. Raisz, E. (1962): Principles of Cartography, McGraw Hill, New York.
3. Sarkar, A. K. (1997): Practical Geography: A Systematic Approach. Orient Longman, Kolkata.
4. Singh, L.R. (2006): Fundamentals of Practical Geography, Sharda Pustak Bhawan, Allahabad.
5. Singh, R.L. and Singh, Rana P.B. (1993): Elements of Practical Geography. Kalyani Publishers, New Delhi,.

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SEMESTER -II  
(Honours)  
GEOG-203/ Regional Geography of the World

Contact Hours: 45

**Objectives:**

To have general knowledge about the world and Asia, and to have comparison between developed and developing nations.

- Unit –I      World Regional Geography: An overview; Concepts, bases and characteristics of developed and developing countries.
- Unit –II      Population growth, Density and distribution, major population density zones.
- Unit –III     Brief regional account of Asia: Physiography, Climate, Power and mineral resources.
- Unit –IV     China: Agricultural and industrial regions.
- Unit –V      USA: Physiography, agricultural and industrial regions.

**Books Recommended**

1. di Blij, H. and Muller, O. (1993): Geography: Regions and Concepts. John Wiley and Sons, New York..
2. Jackson, R. H. and Husman, L. E. (1991): World Regional Geography: Issues for Today. John Wiley and Sons, New York.
3. Jones, P. and Bryan, P. (1954): North America: An Historical, Economic and Regional Geography, Methuen and Company. Ltd, London.
4. Kolb, A. (1971): East Asia, China, Japan, Korea, Vietnam, Methuen, London.
5. Sharma, P. R. (ed.) (1991): Perspectives on Third World Development. Rishi Publication, Varanasi.
6. Stamp, L. D. (1976): Asia: A Regional and Economic Geography, Methuen, London.

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SEMESTER -II  
(Honours)  
GEOG-204/ Practical

Contact Hours: 30

- Unit –I a) Concept of base map and types of map; Map design and layout.  
b) Base maps of World, Asia, USA, China and India.
- Unit –II Thematic mapping showing (world population, climate and resources)
- Unit –III Exercise on time calculation from given locations (longitude).
- Unit –IV Practical notebook and viva voce.

**Books Recommended**

1. Mishra, R.P. and Ramesh A. (1989): Fundamentals of Cartography, Concept Publishing Company, New Delhi.
2. Sarkar, A. K. (1997): Practical Geography: A Systematic Approach. Orient Longman, Kolkata.
3. Singh, L.R. (2006): Fundamentals of Practical Geography, Sharda Pustak Bhawan, Allahabad.
4. Singh, R.L. and Singh, Rana P.B. (1993): Elements of Practical Geography. Kalyani Publishers, New Delhi.

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SEMESTER -III  
(Pass and Honours)  
GEOG-301/ Human Geography

Contact Hours: 60

**Objectives:**

To acquaint the students with the nature of man-environment relationship and to make them understand human capability to adopt and modify the environment in its varied conditions from primitive life style to the modern living.

- Unit –I Meaning, nature and scope of Human geography; development and branches of Human geography
- Unit –II Man-environment dynamic relationships; determinism and Possibilism
- Unit –III Evolution of man; classification of races; characteristics of races and their broad distribution. Human adaptation to environment; Eskimos, Masai Bushman, Gujjars.
- Unit –IV Physical, economic and social factors influencing spatial distribution of world population, distribution and density of population; Concept of over population, under population and optimum population; Migration: types and consequences;
- Unit –V Settlement: Geographical factors influencing human settlement. Origin and growth of rural and urban settlement. Types and patterns of rural settlement. Urban settlement: morphology and functional classification.

**Books Recommended**

1. Husain, M. (1994): Human Geography, Rawat Publications, Jaipur.
2. Leong Goh Cheng (2003): Certificate Physical and Human Geography, Oxford University Press, New Delhi.
3. Norton, W. (1995): Human Geography, Oxford University Press, New York.
4. Singh, L.R. (2005): Fundamentals of Human Geography, Sharda Pustak Bhawan, Allahabad
5. Stoddard, R.H., Wishart, D.J. and Blouet, B.W. : Human Geography. Prentice-Hall, Englewood Cliffs, New Jersey.

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SEMESTER –III  
(Pass and Honours)  
GEOG-302/ Practical

Contact Hours: 30

- Unit –I a) Representation of population data: Distribution, density and growth by: Point (dots, proportionate circles and spheres), Line (isopleths and flow lines) and area (choropleth), line and bar graphs; Age-sex pyramid.  
b) Toposheet interpretation (settlement, transport and land use)
- Unit –II a) Definition and classification of map projection;  
b) Map Projection: Cylindrical (Simple and Equal area) with outline maps drawn.
- Unit –III Surveying: Chain and tape to plot a part of college building.
- Unit –IV Viva voce and Practical Note book

**Books Recommended**

1. Kanetker, T.P. and Kulkarni, S.V.(1967): Surveying and Levelling, Vol I and II V.G. Prakashan, Poona.
2. Mishra, R.P. and Ramesh A. (1989): Fundamentals of Cartography, Concept Publishing Company, New Delhi.
3. Sarkar, A. K. (1997): Practical Geography: A Systematic Approach. Orient Longman, Kolkata.
4. Singh, L.R. (2006): Fundamentals of Practical Geography, Sharda Pustak Bhawan, Allahabad.
5. Steers, J. A. (1965): An Introduction to the Study of Map Projection. University of London Press, London.
6. Talukdar, S. (2008): Introduction to Map Projection. EBH Publishers, Guwahati.

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SEMESTER -III  
(Honours)  
GEOG-303/ Political Geography

Contact Hours: 45

**Objectives:**

To familiarize the students with the geographical factors which have a bearing on the political/ administrative organization of space, and to enhance awareness of multi-dimensional nature of geo-political space.

- Unit –I Nature, approach and significance of political geography  
Historical development of political geography
- Unit –II Development of Geopolitik (nature and approaches)  
Concept of Organic state: Ratzel
- Unit –III Concepts: nation, state; Frontiers and boundary, core and periphery region
- Unit –IV Global strategic models: The Heartland theory;  
Mahan Sea Power concept
- Unit –V World organisation –United Nations  
Regional Associations: EU and SAARC

**Books Recommended**

1. Dikshit, R.D. (1987): Political Geography and Geopolitics. Tata McGraw Hill, New Delhi.
2. Dikshit, R.D. (2000): Political Geography: A Contemporary Perspective. Prentice-Hall, New Delhi.
3. Siddiq, M. (1997): Indian in the Indian Ocean: A Geopolitical Study, Rawat Publications, Jaipur
4. Pounds, N.J.G. (1972): Political Geography. McGraw Hill Publication., New York.
5. Short, John R. (1982): An Introduction to Political Geography. Routledge, London
6. Sukhwai. B.L. (1987): Modern Political Geography of India. Sterling Publication, New Delhi.

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SEMESTER -III  
(Honours)  
GEOG-304/ Practical

Contact Hours: 30

- Unit –I a) Importance of surveying in geography; Instrument handling and care.  
b) Prismatic compass survey to plot a part of college building.
- Unit –II Triangulation Survey by Theodolite to plot a part of college building.
- Unit –III Contouring by Theodolite or Dumpy level
- Unit –IV Practical Note-Book and Viva-voce

**Books Recommended**

1. Kanetker, T.P. and Kulkarni, S.V.(1967): Surveying and Levelling, Vol I and II V.G. Prakashan, Poona.
2. Mishra, R.P. and Ramesh A. (1989): Fundamentals of Cartography, Concept Publishing Company, New Delhi.
3. Sarkar, A. K. (1997): Practical Geography: A Systematic Approach. Orient Longman, Kolkata.
4. Singh, L.R. (2006): Fundamentals of Practical Geography, Sharda Pustak Bhawan, Allahabad.

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SEMESTER –IV  
(Pass and Honours)  
GEOG-401/ Economic Geography

Contact Hours: 60

**Objectives:**

To acquaint the students with the dynamic aspect of economic geography, transformation of economic activities from primary to secondary and tertiary stage and with various factors responsible for economic development.

- Unit –I Meaning, scope and approaches to study economic geography. World resources and their distribution;
- Unit –II Economic activities: Food gathering and hunting, pastoral herding, fishing, forestry and Mining.  
Agriculture: Physical and socio-economic factors influencing agriculture; types of agriculture; food crops and cash crops, distribution and production: Rice, wheat, sugarcane and tea.
- Unit –III Factors influencing industrial location, classification of industries, distribution and production of iron and steel, petro-chemicals and sugar industries.
- Unit –IV Tertiary activities: trade, transport and communication services; geographical factors in the development of water, land and air transport.
- Unit –V Bases of international trade; major trade blocks: EEC and ASEAN; Effects of globalisation on developing countries.

**Books Recommended**

1. Bryson, J., Henry, N., Keeble, D. and Martin, R. (eds.) (1999): The Economic Geography Reader: Producing and Consuming Global Capitalism. John Wiley and Sons, Inc, New York.
2. Coe, N. (2007): Economic Geography: A Contemporary Introduction. Blackwell Publishers, Inc., Massachusetts.
3. Guha, J. S. and Chattoraj, P.R.(2002): A New Approach to Economic Geography: A Study of Resources. The World Press Private Limited, Kolkata.

4. Hanink, D. M. (1997): Principles and Applications of Economic Geography: Economy, Policy, Environment. John Wiley and Sons, Inc, New York.
5. Leong, G. C. and Morgan, G. C.(1982): Human and Economic Geography, Oxford University Press, Singapore .
6. Roy, P.K. (2005): Economic Geography, A Study of Resources, New Central Book Agency (P) Ltd, Kolkata.

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**SEMESTER -IV**  
(Pass and Honours)  
**GEOG-402/ Practical**

Contact Hours: 30

- Unit –I     a) Statistical methods: Measures of central tendency (Mean, Median and Mode);  
                  b) Measures of dispersion (Mean deviation, Quartile deviation and Standard deviation).
- Unit –II     a) Representation of data by Line, Bar, Pie, and Block Pile diagram.  
                  b) Time series analysis of temporal data.
- Unit –III    Map projection: Polar Zenithal (Stereographic, Orthographic and Equidistant) with outline maps drawn
- Unit –IV    Viva voce and Practical note book.

**Books Recommended**

1. Bhagwathi, V. and Pillai, R.S.N. (2003): Practical Statistics, Sultan Chand and Company, New Delhi
2. Gupta, S.P. (1998): Advanced Practical Statistics, Sultan Chand and Company, New Delhi
3. Mahmood, A. (1986): Statistical Methods in Geographical Studies, Rajesh Publications, NewDelhi
4. Mishra, R.P. and Ramesh A. (1989): Fundamentals of Cartography, Concept Publishing Company, New Delhi.
5. Steers, J. A. (1965): An Introduction to the Study of Map Projection. University of London Press, London.
6. Zamir, A. (2002): Statistical Geography: Methods and Applications, Rawat Publications, Jaipur.
7. Talukdar, S. (2008): Introduction to Map Projection. EBH Publishers, Guwahati.

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**SEMESTER -IV**  
(Honours)  
**GEOG-403/ Advanced Geomorphology**

Contact Hours: 45

**Objective:**

The primary objective is to introduce the latest concepts in geomorphology.

- Unit –I     Nature and scope of Geomorphology
- Unit –II    Development of geomorphology: Geomorphological school in USA, Europe and India.
- Unit –III   Earth’s interior; Wegner’s theory of continental drift, plate tectonics.
- Unit –IV   Erosion, transportation and deposition; mass wasting; drainage pattern.
- Unit –V    Concept of cycle of erosion. Fluvial, Arid, Glacial, Karst and Coastal landscapes.

**Books Recommended**

1. Bloom, A. L. (1992): Geomorphology-A Systematic Analysis. Prentice-Hall India, New Delhi.
2. Stoddard, D. R. (ed.)(1996): Process and Form in Geomorphology. Routledge, London,.
3. Kale, V. and Gupta, A. (2001): Elements of Geomorphology. Oxford University Press, Delhi.

4. Thornbury, W. D. (1990): Principles of Geomorphology. Wiley Eastern Edition, New York,.
5. Singh, S. (2004): Geomorphology, Prayag Pustak Bhawan, Allahabad
6. Skinner, B. J. and Porter, S.C. (1996): The Dynamic Earth. John Wiley and Sons, New York,.

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**SEMESTER -IV  
(Honours)  
GEOG-404/ Practical**

Contact Hours: 30

- Unit –I a) Sampling- Types and their Uses;  
b) Correlation and Regression analysis: Karl pearson method.
- Unit –II Average slope map and Block diagram (from same area)
- Unit –III a) Cylindrical Map Projection (Gall’s and Mercator’s) with outline maps drawn.  
b) Conventional Projection (Molloweid’s and Sinusoidal) outline maps drawn.
- Unit –IV Practical Note-Book and Viva-voce

**Books Recommended**

1. Bhagwathi, V. and Pillai, R.S.N. (2003): Practical Statistics, Sultan Chand and Company, New Delhi
2. Gupta, S.P. (1998): Advanced Practical Statistics, Sultan Chand and Company, New Delhi
3. Mahmood, A. (1986): Statistical Methods in Geographical Studies, Rajesh Publications, NewDelhi
4. Mishra, R.P. and Ramesh A. (1989): Fundamentals of Cartography, Concept Publishing Company, New Delhi.
5. Singh, L.R. (2006): Fundamentals of Practical Geography, Sharda Pustak Bhawan, Allahabad.
6. Zamir, A. (2002): Statistical Geography: Methods and Applications, Rawat Publications, Jaipur.
7. Talukdar, S. (2008): Introduction to Map Projection. EBH Publishers, Guwahati.

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**SEMESTER -V  
(Pass and Honours)  
GEOG-501/ Regional Geography of India**

Contact Hours: 60

**Objectives:**

Aims at presenting a comprehensive, integrated and empirically based profile of India so as to understand its geopolitical personality and its relations with other countries.

- Unit –I Locational significance, unity and diversity. Physical environment: physiographic characteristics –Climate, soil and natural vegetation.
- Unit –II Population characteristics: population growth, distribution, density, structure and composition.
- Unit –III Agriculture: agricultural development and Indian economy, modernization of Indian agriculture, agro-climatic regions and special characteristics, agricultural trade.
- Unit –IV Transport: Roads and railways, air transport and pipe transport.
- Unit –V Industry: industrial development and Indian economy, distribution of major industries (iron and steel, cotton textile, petrochemicals, sugar, paper and cement industries) industrial policies and industrial trade.

**Books Recommended**

1. Gautam, A. (2006): Advanced Geography of India, Sharda Pustak Bhawan, Allahabad
2. Khullar, D.R. ( 2007): India: A Comprehensive Geography, Kalyani Publishers, New Delhi
3. Nag, P. and Gupta, S. S. (1992): Geography of India, Concept Publishing Company, New Delhi.
4. Singh , J. (2003): India: A Comprehensive Systematic Geography. Gyanodaya Prakashan, Gorakhpur
5. Singh, R.L. (ed.) (1971): India: A Regional Geography. National Geographical Society of India, Varanasi,.
6. Tiwari, R.C. (2007): Geography of India, Prayag Pustak Bhawan, Allahabad.

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SEMESTER –V  
(Pass and Honours)  
GEOG-502/ Practical

Contact Hours: 30

- Unit –I Thematic mapping: Population, Resources and Industries of India.  
Unit –II Conical projection (One and Two Standard parallel) with outline maps drawn.  
Unit –III Polyconic Projection and Bonne’s Projection with outline maps drawn.  
Unit –IV Viva voce and Practical note book.

**Books Recommended**

1. Mishra, R.P. and Ramesh A. (1989): Fundamentals of Cartography, Concept Publishing Company, New Delhi.
2. Singh, L.R. (2006): Fundamentals of Practical Geography, Sharda Pustak Bhawan, Allahabad.
3. Steers, J. A. (1965): An Introduction to the Study of Map Projection. University of London Press, London.
4. Talukdar, S. (2008): Introduction to Map Projection. EBH Publishers, Guwahati.

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SEMESTER -V  
(Honours)  
GEOG-503/ Applied and Resource Management

Contact Hours: 45

**Objectives:**

To understand the prevalent issues relating to environment, society and economy and to provide a geographical interpretation with special reference to Nagaland. Further, it aims at sensitising the students to the concept of sustainable development.

- Unit –I Definition, nature and scope of resource geography: types of resources.  
Evaluation and exploration of resource through Remote Sensing technique.  
Unit –II Spatial distribution of resource: Water, Energy and Forest.  
Unit –III Number, density, growth and distribution of population pressure and resource utilization.  
Unit –IV Nature, scope and content of applied geography: identification of problems of interdisciplinary nature (like environment resource base, resource use, development and disparity)  
Unit –V Issues Related to Human resources: Social and demographic issues; Carrying capacity of the land; Human resource use; Sustainable development with focus on man environment relationship.

### **Books Recommended**

1. Bryson, J., Henry, N., Keeble, D. and Martin, R. (eds.) (1999): The Economic Geography Reader: Producing and Consuming Global Capitalism. John Wiley and Sons, Inc, New York.
2. Coe, N. (2007): Economic Geography: A Contemporary Introduction. Blackwell Publishers, Inc., Massachusetts.
3. Guha, J. S. and Chattoraj, P.R.(2002): A New Approach to Economic Geography: A Study of Resources. The World Press Private Limited, Kolkata.
4. Hanink, D. M. (1997): Principles and Applications of Economic Geography: Economy, Policy, Environment. John Wiley and Sons, Inc, New York.
5. Leong, G. C. and Morgan, G. C.(1982): Human and Economic Geography, Oxford University Press, Singapore .
6. Roy, P.K. (2005): Economic Geography, A Study of Resources, New Central Book Agency (P) Ltd, Kolkata.

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### SEMESTER -V (Honours) GEOG-504/ Practical

Contact Hours: 30

- Unit –I Remote Sensing: Visual Interpretation of aerial photographs and/or satellite imagery by using photo/image interpretation keys. Delineation and mapping of various physical and cultural features from photograph/ images.
- Unit -II Basics of Computer application and Geographical Information System (GIS):  
Data types of for GIS:  
a) Non-spatial data: entry, tabulation, and charting bar graph, pie graph) etc. using any Spreadsheet programme.  
b) Spatial data: Raster and Vector data entry and creation of layers for point, line and area into system using open source GIS software (i.e. ILWIS).
- Unit –III a) Road profile by Dumpy level;  
b) Determination of height: accessible and inaccessible objects by using Theodolite or Telescopic alidade.
- Unit -IV Practical Notebook and Viva-voce.

### **Books Recommended**

1. Campell, J. B. (2003): Introduction to Remote Sensing. 4<sup>th</sup> edition. Taylor and Francis, London.
2. Curran, P.J. (1985): Principles of Remote Sensing. Longman, London.
3. Lillesand, T.M. and Kiefer, R.W. (2000): Remote Sensing and Image Interpretation. John Wiley and Sons, New York.
4. Nag, P. (ed.) (1992): Thematic Cartography and Remote Sensing. Concept Publishing Company, New Delhi.
5. Rampal, K.K. (1999): Handbook of Aerial Photography and Interpretation. Concept Publishing. Company, New Delhi.
6. Kanetker, T.P. and Kulkarni, S.V.(1967): Surveying and Levelling, Vol I and II V.G. Prakashan, Poona.

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### SEMESTER -VI (Pass and Honours) GEOG-601/ Regional Geography -II (Northeast India with Special Focus on Nagaland)

Contact Hours: 60

### **Objectives:**

To focus on the regional study of Northeast India and Nagaland, and to prospect the region's potentiality for sustainable development.

- Unit –I Northeast India: Locational significance;  
Physical characteristics: Physiography, drainage, climate, Soil and natural vegetation.
- Unit –II Population of Northeast India: Growth, Distribution and Density, Age-sex composition, Rural-urban composition and Religious composition.
- Unit –III Economic basis of Northeast India: Agriculture, Industries, Transport and communication system; Disparity in socio-economic development; Socio-economic problems.
- Unit -IV Nagaland: Locational Significance  
Regions of Nagaland and demographic characteristics
- Unit –V a) Tourism and its potentiality in Nagaland  
b) Problems and prospects of various economic activities  
c) Biodiversity and its conservation issues

**Books Recommended**

1. Bhagabati, A.K., Bora, A. K. and Kar, B.K. (2011): Geography of Assam, Rajesh Publications, New Delhi.
2. Bhagabati, A.K. (ed) : Biodiversity of Assam, Eastern Book House, Guwahati
3. Bhattacharya, P.(2006) : Trend in Tourism Potentiality, Bani Mandir, Guwahati
4. Bhattacharyya, N.N. (2005): North East India: A Systematic Geography, Rajesh Publication, New Delhi
5. Gopal Krishnan, R : Geography of North East India
6. Srivastava, S.C., : Demographic Profile of N.E. India, Mittal Publications
7. Taher, M. and Ahmed, P. (1998): Geography of North East India, Mani Manik Prakash, Guwahati.

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SEMESTER -VI

(Pass and Honours)

GEOG-602/ Practical: Data based on North East India

Contact Hours: 30

- Unit –I Cartographic representation of economic data of Northeast India in spatial and temporal contexts: Histogram, Pie-graph, Age-sex pyramid.
- Unit –II Use of cartographic symbols and their uses: Iso-chronic cartograms, traffic flow diagrams and Choropleth mapping.
- Unit –III a) Survey: Plane Table (Radiation and Intersection)  
b) Use of Global Positioning System (GPS) for identifying a location (only demonstration of GPS device).  
c) Study of landscape by “Google Earth” through Internet enabled PCs.
- Unit –IV Viva voce and Practical note book.

**Books Recommended**

1. Monkhouse, F. J. (1985): Maps and Diagrams. Methuen, London.
2. Sarkar, A. K. (1997): Practical Geography: A Systematic Approach. Orient Longman, Kolkata.
3. Kanetker, T.P. and Kulkarni, S.V.(1967): Surveying and Levelling, Vol I and II V.G. Prakashan, Poona.

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SEMESTER –VI  
(Honours)  
GEOG-603/ Environment and Disaster Management

Contact Hours: 45

**Objectives:**

Aims to provide understanding and awareness of environmental issues at global and regional level and to educate the students on the management of disasters and hazards.

- Unit –I Definition, nature and scope of Environmental Geography; Approach to Environmental development.
- Unit-II Environment and development; emerging environmental problems.
- Unit –III Case study of frequently affected regions: Pacific ring of fire (earthquakes, Volcanoes) Flood problems: Brahmaputra valley, Hurricanes –Florida
- Unit –IV Earthquake zoning in India: Himalayan region and N-E region of India.
- Unit –V Drought problems, Bamboo flowering and forest Fires.

**Books Recommended**

1. Cantledge, B. (ed.), 1992: Monitoring the Environment, Oxford University Press, Oxford
2. Newson, M., 1992: Land, Water and Development, Routledge, London
3. Singh, S., 1991: Environmental Geography, Prayag Pustak Bhawan, Allahabad
4. Strahler, A.N. & A.H. Strahler, 1976: Geography and Man's Environment, John Willey, New York

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SEMESTER -VI  
(Honours)  
GEOG-604/ Project: Field Study and Report Writing

Contact Hours: 30

**Objective:**

Geography being a field oriented subject it has been designed to let the students acquire firsthand knowledge of the surroundings on various aspects.

**Field works:**

Meaning, types and objectives of fieldwork; field methods and techniques; importance of field work in geography, Fieldwork based report writing.

Field Study in local environment: Preparation of field report through fieldwork on any one of the following areas:

- A locality of the city/ town
- A village near the city/ town

Field trip: to any nearby region for comparative study with the study area.

**Report Writing:**

**Books Recommended**

1. Archer, J.E. and Dalton, T.H. (1968): Field Work in Geography, William Clowes and Sons Ltd. London and Beccles
2. Bolton, T. and Newbury, P.A. (1968): Geography through Fieldwork, Blandford Press, London.
3. Jones, P. A. (1968): Field Work in Geography, Longmans, Green and Company Ltd., London and Harlow.
4. Lousenbury, J. F. and Aldrich, F.T. (1986): Introduction to Geographic Field Methods and Techniques, Charles E. Merrill Publishing. Company, Columbus.

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