

GEOGRAPHY
MA/MSc Syllabus

| Semester | Paper Code | Paper | Credit | Marks | |
|------------|---|--|--|-------|-----|
| I | GEO-PG-C101 | Geomorphology | 4 | 100 | |
| | GEO-PG-C102 | Climatology and Biogeography | 4 | 100 | |
| | GEO-PG-C103 | Economic Geography: Concepts, Principles and Techniques | 4 | 100 | |
| | GEO-PG-C104 | Quantitative Methods and Computer Applications in Geography | 4 | 100 | |
| II | GEO-PG-C201 | Systematic and Regional Geography of India with special reference to NE India | 4 | 100 | |
| | GEO-PG-C202 | Remote Sensing and Geographic Information System (Practical) | 4 | 100 | |
| | GEO-PG-C203 | Population and Settlement Geography | 4 | 100 | |
| | GEO-PG-O204 | Environment and Development | 4 | 100 | |
| III | GEO-PG-C301 | History of Ideas in Geography | 4 | 100 | |
| | GEO-PG-C302 | Regional Development and Planning | 4 | 100 | |
| | GEO-PG-O303 | Regional Geography of Nepal and Eastern Himalayas with special reference to Sikkim | 4 | 100 | |
| | GEO-PG-O304 | Rural Development – Planning and Policy with special reference to North-East India | 4 | 100 | |
| IV | Stream A (Resource and Development) | GEO-PG- E401 | Natural Hazards and Disaster Management | 4 | 100 |
| | | GEO-PG-E402 | Geography of Tourism | 4 | 100 |
| | | GEO-PG-E403 | Agricultural Geography with special reference to North-East India | 4 | 100 |
| | | GEO-PG-E404 | Geography of Natural Resources | 4 | 100 |
| | Stream B (Geography of Development) | GEO-PG-E405 | Urban Geography | 4 | 100 |
| | | GEO-PG-E406 | Social and Cultural Geography with special reference to India and Northeast India | 4 | 100 |
| | | GEO-PG-E407 | Geography of Social Well-being | 4 | 100 |
| | | GEO-PG-E408 | Political Geography with special reference to Eastern Himalaya and Northeast India | 4 | 100 |
| | | GEO-PG-E409 | Geography of Borderland with special reference to North-East India | 4 | 100 |
| | | GEO-PG-E410 | Gender and Space | 4 | 100 |
| | GEO-PG-C411 | Fieldwork and Dissertation | 4 | 100 | |

SEMESTER-I

GEO-PG-C-101: Geomorphology

Unit I: Fundamentals

Development of Geomorphologic Thought: classical and modern; Catastrophism Vs Uniformitarianism and Neo-catastrophism.

Fundamental Concepts in Geomorphology

Recent Trends: process studies, structural, quantitative approach and models of dynamic equilibrium

Unit II: Crustal Movements

Isostasy and Crustal Equilibrium in Major Relief Features of the Earth

Continental Drift, Sea Floor Spreading, palaeo-magnetism

Plate Tectonics: types of plates, boundaries, movement, Tsunami, Earthquakes, Neo-tectonic process and Expanding Earth

Unit III: Gradation Processes and Landforms

Concept of Gradation: Degradation and Aggradation

Weathering and Mass Movements: types and processes, Models of slope evolution,

Fluvial, Glacial, and Aeolian Processes and Landforms and topographic evolution

Hydro-geomorphic function of river, Marine geomorphology and Applied Geomorphology (Urban, Mineral and Environment)

Unit IV: Morphometric Techniques and Geological Maps

Drainage analysis: stream order, frequency, density and bifurcation ratio,

Relief and terrain analysis, Determination of average slopes (Wentworth, Smith, Raiz and Henry)

Interpretation of Geological maps: construction of geological section (folded and faulted, and unconformities).

(Total 3 hours for theory + 2 hours for consultation for Exercises and Assignments =5 contact hours/week)

Readings:

1. Allison, R.J. (2002). *Applied Geomorphology: Theory and Practice*. New York: Wiley and Son Co.
2. Avijit, G. (2011). *Tropical Geomorphology*. New Delhi: Cambridge University Press.
3. Chorley, R.J., et al. (1984). *Geomorphology*. New York: John Wiley and Sons.
4. Colin, E. T (1988). *An Introduction to Theoretical Geomorphology*. New York: Boston Press.
5. Garrison, T. (2013). *Oceanography: An Invitation to Marine Science*, 8E. Belmont: Brooks/Cole Cengage Learning
6. Hugget, R.J. (2011). *Fundamentals of Geomorphology*. London: Routledge.
7. Kale, V.S and Gupta A. (2010). *Introduction to Geomorphology*. New Delhi: Cambridge University Press.
8. Strahler, A. (2006). *Introduction to Modern Physical Geography*. New York: John Wiley & Sons.
9. Thornbury, W. D. (2004). *Principles of Geomorphology*. New Delhi: CBS.
10. Wooldridge, W. and Morgan (1960). *An outline of Geomorphology*. London: Longman Green & Co.

GEO-PG-C-102: Climatology and Biogeography

Unit I: Fundamentals of Climatology

Development of climatology, its scope and its contemporary relevance Structure and Composition of the atmosphere Elements of Climate: Insolation, Temperature, Moisture, Pressure Systems; Wind systems and General Circulation of the atmosphere Air masses and Atmospheric Disturbances, tropical and temperate cyclones; their origin and occlusion

Unit II: Classification and Dynamics of Climate

Principles of Climatic classification; Classification of world climates by Koppen and Thornthwaite; Major climatic regions of the world Climates of India, Monsoons and Dynamics of Monsoon, Consequences Monsoon failure in India, Regional climate with special reference to Himalayas Climate change: Concepts, Evidences and theories of climate change, Global Warming Vs Global Cooling and its impact on society; IPCC and global climate conventions and protocols

Unit III: Fundamentals of Biogeography

Scope and Development of Biogeography, Environment, Habitat and Plant-animal association, biome types Element of plant geography, distribution of forests and major communities Zoogeography and Bio-diversity, its significance with special reference to India and bio-diversity resources of the North-East India Conservation of Biotic Resources

Unit IV: Methods and Techniques

Isoleths and line graphs, Venn diagram, Rainfall dispersion diagrams, Climograph & Hythergraph Calculation of climatic indices: rainfall-runoff relationship, and concept of hydrographs. Interpretation of weather maps, Synoptic climatology and weather forecasting methods.

(Total 3 hours for theory + 2 hours for consultation for Exercises and Assignments =5 contact hours/week)

Readings:

1. Ahrens, C. Donald. (2016). *Meteorology Today: An Introduction to Weather, Climate and the Environment*, (11th Edition). Boston : Thomson Brook/Cole
2. Ahrens, C. Donald. (2012) *Essentials of Meteorology: An Invitation to the Atmosphere*, (6th edition). Belmont: Thomson Brook/Cole
3. Bonan, Gordon B. (2008). *Ecological climatology: Concepts and Applications*.(2nd Edition) Cambridge: University Press
4. Chritchfield, H.J. (1993) *General Climatology*. New Delhi: Prentice Hall of India
5. Cox, C. B, P.D. Moore and R.J. Ladle. (2010). *Biogeography: An Ecological and Evolutionary Approach*, (9th edition). Oxford: Wiley Blackwell
6. D.S Lal. (2006) *Climatology*, Chaitan Publication Allahabad
7. Hugget, Richard John (2004) *Fundamentals of Biogeography*.(2nd Edition). London: Routledge
8. Robinson P.J. and Petty A. (1997). *Applied Climatology-Principles and Practices*, (Eds.). London: Routledge
9. Peake, S. and Joe Smith. (2009) *Climate Change-From Science to Sustainability*, New York, Oxford University Press
10. Rohli, Robert V. and Anthony J. Vega (2011). *Climatology*. Burlington: Jones & Bartlett Learning

GEO-PG-C-103: Economic Geography: Concepts, Principles and Techniques

Unit I: Fundamentals

Definition, Scope and development of economic geography
Economic activities and sectors (primary, secondary, tertiary and quaternary)
Concept of economic development, indicators of development, sustainable development, Human Development
Disparities in world economic development, Development theories: Divergence Convergence Model (Myrdal-Hirschman), Dependency Theory (Frank-Amin)

Unit II: Location Theories

Industrial Location theories: Transport cost, Weberian Location analysis, agglomerations and Post-Fordist localisation
Agricultural location model (Von Thunen) and Diffusion Theory (Hagerstrand)
Spatial organization theories: Christaller's Central place theory and Losch's General theory

Unit III: Resources and Economic Regions

Concept and taxonomy of resources, resource depletion, conservation and sustainability of resources
World agricultural systems, agricultural regions and problems of food-security, Industrial complexes, Industrial regions of the world
World Trade in major commodities and services, GATT, WTO, EU and Emerging markets

Unit IV: Models, Techniques, and Interpretation

Sectoral analysis, Isodapanes and Weight Triangle, Gravity Model, Agricultural Efficiency, Intensity, Crop combination, cropping pattern, Transport Flows and Networks.
Indices of Development

(Total 3 hours for theory + 2 hours for consultation for Exercises and Assignments =5 contact hours/week)

Readings:

1. Basu, K. and Maertens, A. (2011). *The Concise Oxford Companion to Economics in India*, Oxford University Press, New Delhi.
2. Barnes, T.J. (2009). *Economic Geography*, Elsevier Ltd., pp. 315-326.
3. Coe, N.M., Kelly, P.F. & Yeung, H.W.C. (2012). *Economic Geography: A Contemporary Edition*, Boston: Blackwell Publishing
4. Hartshorne, T.A. and Alexander J.W. (1994). *Economic Geography*, New Delhi: Prentice Hall
5. Knox, P, J. Agnew J. & L. McCarthy. (2015). *The Geography of the World Economy* (6th Edition), London: Routledge.
6. Knowles, R. and Wareing, J. (2012). *Economic and Social Geography*. New Delhi: Rupa Publications India Pvt. Limited.
7. Peet, Richard and Hartwick, Elaine (2010). *Theories of Development: Contentions, Argument and Alternatives* (Second Edition), Jaipur: Rawat Publications.

8. Raza, M. & Aggarwal, Y. (1999). *Transport Geography of India: Commodity Flows and the Regional Structure of the Indian Economy*, New Delhi: Concept Publishing Company.
9. Sarkar, A. (2013), *Quantitative Geography*, New Delhi: Orient BlackSwan
10. Webber, M. (2005). International Political Economy (Chapter 30) in *A Companion to Economic Geography* (ed.) by Sheppard & Barnes, Blackwell Publishing, pp. 499-518.

GEO-PG-C-104: Quantitative Methods and Computer Applications in Geography

Unit I: Geographical Data: Concept and Applications

Univariate Method: Measures of central tendency, Measures of absolute and relative dispersion, Techniques of Bivariate Analysis: The Scatter Plot, Correlation Analysis, Regression Analysis, Analysis of Variance (ANOVA)
 Calculation of Growth rates: simple, compound and exponential

Unit II: Indices and their application

Sopher's Index, concentration index, location quotient, Lorenz Curve and Gini co-efficient

Unit III Theory of Probability

Introduction, Random Experiment, Outcome, Event; Terminology used in Probability; Theorems of probability; Theoretical Distribution: Binomial, Poisson, Normal

Unit IV: Sampling theory

Meaning and object of sampling, Types of sampling, Sampling Distribution, Standard Error
 Testing of Hypothesis: Parametric tests- 'z', 't' and 'F' tests
 Non-parametric test: Chi-Square

(Total 3 hours for theory + 2 hours for consultation for Exercises and Assignments =5 contact hours/week)

Readings:

1. Clifford, Nicholas. *et al* (2016). *Key Methods in Geography*. Los Angeles: Sage Publications.
2. Ebdon, David (1985). *Statistics in Geography: A Practical Approach*. Malden, MA: Blackwell Publishers.
3. Gupta, Goon and M.K. Gupta (1991). *Fundamental of Statistics*. Delhi: McGraw Hills Book Company.
4. Hammond, R. and Patrick McCullagh (1974). *Quantitative Techniques in Geography: An Introduction*. Oxford: Clarendon Press.
5. Matthews, John A. (2013). *Quantitative and Statistical Approaches to Geography: A Practical Manual*. E-book. Elsevier.
6. McCarroll, D. (2016). *Simple Statistical Tests for Geography*. London: CRC Press
7. Mehmood, Aslam (1978). *Quantitative Methods in Geography*. New Delhi: Rajesh Publications.
8. Pal, Saroj (1998). *Statistics for Geoscientists: Techniques and Applications*. New Delhi: Concept Publishing Company.
9. Rogerson, Peter (2014). *Statistical Methods for Geography*. London: Sage Publications.

10. Sarkar, Ashis (2013). *Quantitative Geography: Techniques and Presentations*. Hyderabad: Orient BlackSwan.

SEMESTER II

GEO-PG-C-201 Systematic and Regional Geography of India with special reference to NE India

Unit I: Physical Bases of Geography of India

Relief, Geology and Physiographic Divisions Climate and Climatic Divisions Drainage System and Water Resources Natural Vegetation and Soils Regions of India

Unit II: Historical, Cultural and Economic Geography of India

Evolution of regions and boundaries since the British period Languages and Religions in India Population: Growth, Density and Distribution; population problems Indian Agriculture: Its regional distribution and problems Industries, industrial locations and industrial region Transportation Systems and Routes

Unit III: Regional Divisions of India and Regional Geographies

Basis of Regionalisation of India: OHK Spate, RL Singh, and AsokMitra Macro Region: Extra-Peninsular India (The Himalayas) with emphasis on Eastern Himalaya Selected Meso-regions: UP Himalaya, Upper Ganga Plain, Chotanagpur Plateau, Meghalaya Plateau Micro-regions: Kashmir Valley, Sikkim Himalaya, Kaveri Delta, and Konkon Coastal Plains

Unit IV: North-Eastern Region

North-East India as a region Physical divisions and characteristics (Physiography, drainage, climate and bio-diversity); Population growth and distribution, Population issues in North-East India Economic activities: agriculture (types and patterns) and Natural resources and manufacturing industries; Development issues and problems;

Readings:

1. Deshpande, C.D. (1992). *India – A Regional Interpretation*. , New Delhi, ICSSR and Northern Book Centre
2. Deshpande, C.D. (1971). *Regional Geography of Maharashtra*. New Delhi: National Book trust of India
3. R.L. Singh (1989) *India: A Regional Geography*. Delhi: UBSPD,
4. Sen Gupta, P. and Sdaysuk, Galina. (1968). *Economic Regionalisation of India – Problems Approaches*, Monograph No.8, New Delhi: Census Commissioner, Govt. of India
5. Spate, O.H.K (1967) *India and Pakistan*, (3rd edition) London: Methuen
6. Taher, M. and Ahmad, A.(1998) *Geography North East India*, New Delhi: El Dorado Publications

7. Bhattacharya N.N. (2009). *North East India : A Systematic Geography*. Delhi: Rajesh Publications
8. Chatterjee. S.P (1982) *An Introductory Regional Geography: India*. Delhi: Orient Longman Ltd.
9. Govt. of India (2017) *India*. New Delhi: Publications Division, Ministry of Information and Broadcasting.
10. Govt. of India (Yearly) *Economic Survey*, Ministry of Finance, New Delhi: Oxford University Press India

GEO-PG-C-202: Remote Sensing and Geographic Information System (Practical)

Unit-I: Basics of Remote Sensing

Introduction: definition and history and Physics of Remote Sensing- Electro- Magnetic Radiation, Radiation laws, Spectral Signatures, and spectral response of objects and Elements of interpretations
 Platforms, satellite system- Velocity, Geostationary and Sun synchronous satellites;
 Sensors-Concept of IFOV, Resolution (MSS, microwave, thermal and hyperspectral)

Unit II Analysis of Remote Sensing Data

Basics of Geometry of aerial photograph, determination of Scale and height, image parallax;
 Visual interpretation (interpretation keys and elements, Physical and cultural features)
 Digital image processing-data formats, radio metric and geometric correction
 Image enhancement-(contrast, low and high pass filters, PCA, and vegetation index transforms, Image Classification-Supervised and unsupervised)

Unit III: Basics of GIS

Components of GIS, Data types and data models, Data input (scanning, digitization, topology creation
 Non spatial data (linking, query and display) thematic mapping
 GNSS-GPS (Space Segment, Satellite Triangulation, Pseudo Random Code, Control segment), DGPS;

Unit IV: RS and GIS combined

DEM and 3D visualization, Spatial analysis- slope aspect, flow, accumulation, direction, stream order scheme, watershed analysis, Remote Sensing application for agriculture, forest and hydrology.

Readings:

1. Burrough, P.A. and McDonnell, R.A. (1998). *Principles of Geographic Information Systems*. London: Oxford University Press.
2. Campbell, J.B. and Randolph, H. W. (2011) *Introduction to Remote Sensing*. New York: Guilford Press.
3. Demers, M. N. (2000). *Fundamental of Geographic Information Systems*. London: John Wiley and Sons.
4. Gottfried, (2003): *Geoinformation: Remote Sensing, Photogrammetry and Geographic*

- Information Systems*. London: Taylor & Francis.
5. George, J. (2013). *Fundamental of Remote Sensing*. New Delhi: Universities Press.
 6. Heywood, Ian (2000). *Geographical Information Systems*. London: Longman
 7. Heywood, I. and et. at. (2006). *An Introduction to Geographical Information System*. London: Pearson Education,
 8. Jensen, J.R. (2004). *Digital Image Prcession*. New York: Pearson Education.
 9. Jones, C.B. (1997). *Geographical Information Systems and Computer cartography*. London: Addison Wesley Longman Ltd.
 10. Lillesand, T. and Kiefer, R. (2007). *Remote Sensing and Image Interpretation*. London: Wiley,

GEO-PG-C-203: Population and Settlement Geography

Unit I: Concept, distribution and growth

Population Geography: Evolution, Scope and Subject matter, Relationship with Demography and other Social Sciences, Population Distribution and Growth: World Patterns and their determinants; Population distribution and growth in India; Demographic Transition Theory; Demographic Dividend

Unit II: Population Change

Fertility and its measures; Mortality and its measures; Mobility; Factors affecting Population Change; World Patterns of Fertility, Fertility in India; Mortality Patterns in the world and India

Unit III: Migration

Concept; Migration Types; Determinants of Migration; consequences of Internal and International Migration; Laws of Migration

Unit IV: Settlements

Settlements: Forms, Types and Patterns of rural settlements with special reference to India; Transformation of rural settlements
 Urban Settlements: Urbanisation Process; Urbanization in India; Size-Class Distribution of urban settlements; Distribution of cities in India, Rural-Urban migration, Mega-cities: opportunities and challenges; Slums and urban poor,

Readings:

1. Bhende Asha, A. and Kanitkar, T. (1982). *Principles of Population Studies*, II Edn., Bombay: Himalaya Publishing House.
2. Carter, Gregg Lee (2016). *Population and Society: An Introduction*. West Sussex: Wiley-Blackwell.
3. Chandana, R.C. (2014). *Geography of Population*. Ludhiana: Kalyani Publishers.
4. Clarke, John I. (1971). *Population Geography*. Oxford: Pergamon.
5. Hassan, Mohammad Izhar (2005). *Population Geography*. Jaipur: Rawat Publications.
6. Kayastha, S. L. (2011). *Geography of Population*. Jaipur: Rawat Publications
7. Kinsley Davies (1951). *The Population of India and Iraq*. Princeton University Press.
8. Singh, K.P. (2012). *Population and Settlement Geography*. New Delhi: Axis Publications
9. Singh, R.L. and K.N. Singh (eds. 1975). *Readings in Rural Settlement Geography*. Varanasi: Geographical Society of India.
10. Trewartha, G. T. (1969). *A Geography of Population: World Patterns*. New York: John Wiley.

GEO-PG-O-204: Environment and Development

Unit I: Concepts

- i. Environment, Ecosystem, Ecosystem Services
- ii. Economic Growth, Development, Sustainable Development
- iii. Deep Ecology, Environmental Ethics, Political Ecology, Green Economy
- iv. Human Security, Environmental Security, Environmental Justice

Unit II: Environmental Concerns related to Development

- i. Global Environmental Degradation: Drivers of Ecosystem/Environment Change, Deforestation and Loss of Biodiversity, Pollution, Climate Change, Implications for Human Security
- ii. Global Events for Environmentally Sustainable Development: UN Convention on Human Environment, Brundtland Commission, Montreal Protocol, Rio Summit, Agenda 21, UNFCCC, Kyoto Protocol, WSSD 2001, 2011

Unit III: State of India's Environment

- i. Land, Water, Air, Forest, Mineral Resources, Food Security, Health, Wildlife, Glacier
- ii. Population, Urbanisation challenges, Mega-Development Projects
- iii. Socio-environmental Movements, Environmental Leaders
- iv. Climate Change and Disasters with particular focus on the Himalaya
- v. Important Environmental Policies and Laws in India

Unit IV: Introduction to Environmental and Social Impact Assessment

- ii. Evolution of EIA and SIA
- iii. EIA Regulations in India
- iv. SIA: Legal Frameworks
- v. Public Participation and Decision Making
- vi. Benefit Sharing Mechanisms in Development Projects

Readings:

1. Barrow, C. J. (1999). *Environmental Management*. London: Routledge.
2. CSE. (2017). *Environment Reader for Universities*. New Delhi: Centre for Science and Environment.
3. Dawson, J. A., & J. C. Doornik (1975). *Evaluating the Human Environment: Essays in applied geography*, (Eds). London (reprint): Edward Arnold.
4. Finsterbusch, K. K., & Walf, C. P. (1997). *Methodology of Social Impact Assessment*, Downden, . . Strondsburg: Hutchinson & Ross.
5. Guha, R. (2014). *Environmentalism: A Global History*. Delhi: Penguin.
6. Ives, J. D. (2004). *Himalayan perception: Environmental change and the well-being of mountain peoples*. London (reprint 2006): Routledge .
7. Lohani, B. N. (1997). *Environmental impact assessment for developing countries in Asia (Vol I)*. Manila: ADB.

8. Odum, E. P. (1971). *Fundamentals of Ecology*. Philadelphia: W.B. Sanders.
9. Park, C. C. (1981). *Ecology and Environmental Management: A Geographical Perspective*. London: Butterworths.
10. World Bank. 2010. *Environment and social management framework*. Vol. 1, 2 and 3 of India

SEMESTER III

GEO-PG-C-301: History of Ideas in Geography

Unit I: Emergence of the discipline

Historical Development: Contribution of major proponents in geography in the ancient world (the Greeks, the Romans and Indians)
 Development of Geography during the Middle Ages
 Reformation, Age of Enlightenment and pre-Modern geographies (Varenus and Kant)
 Age of Discovery and Exploration.

Unit II: Shaping the discipline

Nineteenth Century Geography: Ritter and Humboldt
 Ratzel, Semple, Huntington and Taylor - Environmental Determinism
 Possibilist School; La Blache, Brunches and the French school
 Influence of Darwinism on Geography

Unit III: Towards scientific explanation and theory building

Early 20th Century Geographies: Sauer--Cultural School; Hartshorne—Regional School (areal differentiation);
 Dualisms—Regional Vs. systematic, Physical vs. Human
 Positivism in Geography, Quantitative Revolution and Logical Positivism

Unit IV: Geography as Social Science

Contemporary geography: Behaviouralism and Humanistic Geography
 Radical and Marxist Geography, Gender and Feminist Geography, Postcolonial Geography

Readings:

1. Castree, Noel, Alisdair Rogers, and Douglas Sherman, (2005). *Questioning geography: fundamental debates*, (edited). Boston: Wiley-Blackwell
2. Livingstone, David (1993). *The Geographical Tradition.*, London: Oxford Blackwell
3. Duxit, R.D (2003). *Geographical Thought, A contextual History of Ideas*. New Delhi: Prentice Hall of India
4. Peet, R. (1978). *Radical Geography*, (2nd Edition). London: Methuen
5. Peet, R. And Thrift, N. (2002.). *New Models in Geography*, Vol. 1 and 2, (edited) London: Unwin Hyman
6. Holt-Jensen, Arild.(1999). *Geography-History and Concepts: A Student's Guide*. London : Sage
7. Johnston, Ron, and James D. Sidaway. (2015). *Geography and geographers: Anglo-American human geography since 1945*. London: Routledge.

8. Kitchin, Rob, and Nigel Thrift. (2009). *International encyclopaedia of human geography (In 12 Vols)*. Elsevier.
9. Martin, G.J and T.S. Martin (2005). *All Possible Worlds: A History of Geographical Ideas*. New York: Oxford University Press
10. Stoddard, D.R. (1987). *On Geography & Its History*, Oxford: Basil-Blackwell

GEO-PG-C-302: Regional Development and Planning

Unit I: Concepts and Theories

Concept and Typology of a Region: Formal, Functional, and Planning Regions
 Concept of regional development and Planning
 History of development of Regional Planning
 Scope, objectives, Rationale and Principles of Regional planning
 Theories of Regional Development

Unit II: Approaches to Regional Planning

Types of Planning
 Environment and Regional Planning
 Settlements (Christaller, Isard, Weber etc) with particular focus on Challenges of Mega City Regions
 Remote Sensing /GIS and Regional Planning
 Migration and Regional Planning
 Transport and Regional Planning

Unit III: Regional Planning practices in India

Regional development planning in Indian National Plans
 Metropolitan Planning, Resource Development Region Planning, National Capital Region Planning, Special Purpose Regions Planning- HADP, BADP, DPAP, NEC and NE Region Planning , Multi-level planning, Decentralized Planning
 Legislative Frameworks of Regional Planning (including 73rd and 74th Amendment Acts)

Unit IV: Levels of Regional Development in India

Sources of Data
 Measures of regional development and disparities in India
 Human and State Development Reports
 Case Studies: Urbanisation, Migration, Health, Education, Employment and Infrastructure with particular focus on North East India.

Readings:

1. Chand, M., & Puri, V. K. (1983). *Regional Planning in India*. New Delhi: Allied
2. Dawkins, D. J. (2003). Regional Development Theory: Conceptual Foundations, Classic Works, and Recent Developments. *Journal of Planning Literature*, 18 (2), 131-172.
3. Issard, W. (1956). *Location and Space Economy*. Massachusetts: MIT Press.
4. Issard, W. (1971). *Methods of Regional Analysis : An Introduction to Regional Science*. Cambridge: MIT.

5. Maboguje, A. L., & Mishra, R. P. (1995). *Regional Development Alternatives: International Perspectives*. Nagoya: United Nations Centre for Regional Development Series (1-7), on Regional Development.
6. Mishra, R. P. (1992). *Regional Planning: Concepts, Tools, Techniques and Case Studies*. New Delhi (Revised Edition): Concept.
7. Mitra, A. (1968). *Levels of Development in India, Census of India 1961*. Monograph No.7.
8. Mohapatra, A. C., & Pathak, C. R. (2003). *Economic Liberalisation and Regional Disparities in India*. Shillong: Star Publication House.
9. Sundaram, K. V. (1985). *Geography and Planning*. New Delhi: Concept.
10. Richardson, H. W. (1969). *Urban and Regional Economics*. London: World Univ Press

GEO-PG-O-303: Regional Geography of Nepal and Eastern Himalayas with special reference to Sikkim and Darjeeling

Unit I: The Setting

General background to Nepal and Eastern Himalayas and its divisions, Nepal, Darjeeling-Sikkim and Bhutan Himalayas, Arunachal Himalayas, Geological evolution, Physiography and drainage systems Climate, natural hazards, natural vegetation and soils

Unit II: Diversities and Plurality

Cultural Evolution, Ethnicities and Cultural diversity and regions Political history and state formations, Geo-political contexts of Nepal and Eastern Himalayas and cross border issues. Population distribution and growth, population problems, rural and urban settlements

Unit III: Economy

Agrarian economy, shifting cultivation, Terrace and plantation farming, Forestry and foraging economies, Rural livelihoods Industries, organized sectors and traditional products, occupations and employment Communications and trade with special emphasis on border trade with China (Tibet), and Bangladesh

Unit IV: Regional Geography of Sikkim

Physiography, climate and ecological zones, drainage and water resources, bio-logical resources and biodiversity Peopling, population distribution, ethnicities, Population growth Economic enterprises in Sikkim, adventure and eco-tourism, Agriculture and plantation economies, Manufacturing including traditional crafts Problems of economic and cultural development of Sikkim

Readings:

1. Das, H.P.(1970). *Geography of Assam*, New Delhi: NBT.
2. Gopalakrishnan, R. (1996). *Socio-Political framework of North East India*, New Delhi: Vikas.
3. Lama, M.P.(2001). *Sikkim: Human Development Report*. Government of Sikkim, Delhi: Social Science Press
4. Sinha, A.C. (2009). *Sikkim: Feudal and Democratic*, New Delhi: Indus Publishing Company

5. Taher, M. and A. Ahmad. (1998). *Geography North East India*, New Delhi: El Dorado Publications
6. **Karan, Pradyumna P. (1990). *Bhutan, Environment, Culture and Development Strategy*. Delhi: Intellectual Publishing House**
7. **Karan, Pradyumna P and William M. Jenkins (1960). *Nepal, a cultural and physical geography*. Kentucky: University of Kentucky Press**
- 8 Duff, Andrew (2015). *Sikkim: Requiem for a Himalayan Kingdom*, Berlin: Random House
9. **Coelho, V. H. (1970). *Sikkim and Bhutan*. Delhi: Indian Council for Cultural Relations**
- 10 Bhattacharya N.N. (2009). *North East India : A Systematic Geography*. Delhi: Rajesh Publications

GEO-PG-O304: Rural Development – Planning and Policy with special reference to North-East India

Unit-I: Concepts

Rural- Concepts, contestation and dynamics of rural space-created, produced and reproduced; Processes of rural transformation–Imagination of rural, Exploitation of rural, Consumption of Rural, Developing Rural, Living with Rural, Performing of Rural, Regulation and Remaking of Rural.

Unit-II: Rural development: principles and process

Concept of rural Development, basic elements, dilemmas
Paradigms/theories and rural development, globalization and sustainable rural development and measures of rural development,
Rural Development Processes in India: Major features of colonial and post- Independence period. Rural economy of India- size and structure (agriculture and non-agriculture)
Rural-Urban Relations: Rural-Urban continuum, disparities and migration.

Unit III: Rural Development Programmes and Policies

Rural development policy in India, Rural Poverty Alleviation Programmes and sustainable livelihoods. Financing bodies of rural Development,
73rd Amendment, Role of rural market (periodic and permanent) in rural development,

Unit IV: Rural Development in North-East.

Rural Infrastructure planning: physical infrastructure-connectivity,
Decentralised Planning for rural areas: Autonomous Hill Development Council, Village council, sixth schedule provision for local institutions in North-East.
Traditional Institutions: Dzumsa, Darbar Shnong, ADC etc.
Civil society institutions, SHG, etc. Problems and Challenges.
Rural development programmes and policies in Sikkim

Readings:

1. Francisco J. T (2008). *Rural Analysis and Management: An Earth Science Approach to Rural Science*, London: Springer.
2. Desai, V. (1986). *Rural Development*, Vol-1-6, New Delhi: Himalayan Publishing House.
3. Government of India (2014). *Annual Report -2012-13*, New Delhi: Ministry of Rural Area and employment, Government of India.

4. Hugh D. Clout (1972). *Rural Geography- An Introduction Survey*. New York: Pergamon Press.
5. NIRD (2011). *India Rural Development Report 2010-11*. Hyderabad.
6. Rao R.N (1986). *Strategy for Integrated Rural Development*, New Delhi: B.R Publication.
7. Ramachandran, H. and Guimaraes, J.P.C (1991). *Integrated Rural Development in Asia-Learning from Recent Experience*. New Delhi: Concept.
8. Singh, K. (2007). *Rural Development- Principles, Policies and Management*, New Delhi: Sage.
9. Woods M.(2011). *Rural*, London: Routledge,
10. Srinivas. M.N (1968). *Village India*, Bombay: Asia Publication House.

SEMESTER IV

GEO-PG-E-401: Natural Hazards and Disaster Management

Unit I: Concepts and Types

- i. Concepts and definitions: hazard, disaster, risk, uncertainty, resilience, adaptation, vulnerability,
- ii. Classes/Types of Disasters (Natural and Anthropogenic): Earthquake, Mass Movement, Forest Fire, Floods, Famine, Drought, Biological disaster, Industrial disaster, Nuclear disaster, War.
- iii. Spatial Dimensions of the Natural Hazards and Disasters

Unit II: India and Natural Disasters

- i. Disaster Profile of India: identifying area of Vulnerability
- ii. Natural Disasters in the Himalaya
- iii. Impact of Natural Disasters on Human Security

Unit III: Disaster Vulnerabilities of Sikkim

- i. Earthquake (with focus on 2011)
- ii. Landslide
- iii. Flood (including GLOF)
- iv. Forest Fire
- v. Newer hazards and disaster challenges (Mega Hydropower projects, Pharmaceutical Industries, Climate Change etc)

Unit IV: Disaster Management

- i. History of DM: Hyogo and Sendai Frameworks
- ii. Pre Disaster: Prevention, Mitigation, Preparedness
- iii. Post Disaster: Response and Recovery
- iv. Key Players in Disaster Management
- v. Training and Capacity Building
- iv. Role of Media and RS and GIS in disaster studies

Readings:

1. Blaikie, P., Cannon, T., & Davis, I. (1994). *At Risk: Natural Hazards, People's Vulnerability, and Disasters*. London: Routledge.
2. Council, N. R. (2006). *Facing Hazards and Disasters: Understanding Human Dimensions*. Washington: National Academies Press.
3. Documents, G. O. (Various Years). *Vulnerability Atlas (2004), Disaster Management Act (2005), Disaster Management Policy (2009)*.
4. Flynn, S. (2007). *The Edge of Disaster: Rebuilding A Resilient Nation*. New York: Random House.
5. Pal, I., & Shaw, R. (2017). *Disaster Risk Governance in India and Cross Cutting Issues*, Singapore: Springer.
6. Platt, R. H. (1999). *Disasters and Democracy: The Politics of Extreme Natural Events*. Washington: Island Press.
7. Quarantelli, E. (1998). *What is a Disaster? Perspectives on the Question*. London: Routledge.
8. Paraswamam, S., & Unikrishnan, P. V. (2000). *India Disaster Report*. New Delhi: Oxford.
9. Schneid, T., & Collins, I. (1998). *Disaster Management and Preparedness*. UNU-EHS. Various years. World Risk Reports. Washington: Lewis.
10. Wisner, B., Blaikie, P., Cannon, T., & Davis, I. (2004). *At Risk: Natural Hazards, People's Vulnerability and Disasters (2nd Ed.)*. London and New York: Routledge.

GEO-PG-E-402: Geography of Tourism with special reference to Sikkim**Unit-I: Concept and Issues of Tourism**

Concepts and typology, emerging issues in tourism, Modern tourism, Geography of Tourism-Development, Status, Spatial and temporal pattern of international tourism.

Unit-II: Trends and Tourism Geographies

Demand and Motivation: Models, factors influencing both tourist generating and destination areas, consumption and identity, Constraints to tourism.

Trends of tourism: Urban and Rural Tourism, Coastal tourism, Mountain tourism, Heritage tourism, pro-poor tourism, Politics of tourism, Political Economy of Third World tourism.

Unit- III: Impacts of Tourism and Planning

Economic, Socio-cultural, and Environmental Impacts, Resource management and Carrying Capacity, the Limit of Acceptable Change and Impact on Physical Environment:

Policies, Programmes and Planning in Tourism, Role of NTAS, ITDC, ICPB, National Tourism Board and Conservation Policy

Unit-IV: Tourism in Sikkim

Development of Tourism in Sikkim: Infrastructure development, tourist demand and Employment, Potentials and Challenges, Tourism sites and locations; tourist information systems, Tourism and its effects on environment; moral and ethical issues in high-tourist areas,

Eco-tourism and alternative forms of tourism potentials in Sikkim, Government policies and Programmes.

Readings:

1. Hall, C.M. and S.J. Page (1999). *The Geography of Tourism and Recreation: Environment,*

- Place and Space*. London: Routledge.
2. Hall, M.C. (2008). *Tourism Planning Policies, Process and Relationships*. London: Pearson Education Ltd.
 3. Mowforth, M. and Munt, I. (2009). *Tourism and Sustainability*, London: Routledge.
 4. Pearce, D. G. (1995). *Tourism today: A Geographical Analysis*. London: Longman.
 5. Shackly, M. (2006). *Atlas of Travel and tourism Development*, London: Elsevier.
 6. Shaw, G. and William, A.M. (1994). *Critical Issues in Tourism: A Geographical Perspective*. London: Blackwell.
 7. Stephen, J.P. and Connell J. (2009). *Tourism: A Modern Synthesis*. London: Cengage Learning.
 8. Smith, S.L.J (1983). *Recreational Geography*. London: Longman.
 9. William S. and Lew A.A (2015). *Tourism Geography*. New York: Routledge
 10. Urry, J. and Larson, J. (2011). *The Tourist Gaze 3.0*, London: Sage

GEO-PG-E-403: Agricultural Geography with special reference to North-East India

Unit I: Origin and Development

Nature, Scope and Significance of Agricultural Geography

Origin and development of agriculture, diffusion and adoption of crops and animals and gene centres.

Approaches to the study of Agricultural Geography: commodity, regional and systematic

Political Economy of Agriculture in India and Agrarian distress.

Unit II: Determinants of Agriculture

Determinants: Physical, Socio-economic and technological

Agricultural Regionalization: Cropping pattern, crop combination, diversification and specialization, and degree of commercialization

Crop intensity, efficiency and productivity patterns with special reference to India;

Green Revolution - its regional impacts and consequences

Agricultural marketing systems

Unit III: Agricultural Systems in the World

Whittlesey's classification of agricultural regions and recent changes

Von Thunen's theory of agricultural location and recent modifications

Agricultural Land use classes in India

Land capability classification: methods and applications

Unit IV: Agriculture in North-East India

Shifting cultivation: system and patterns; consequences of shifting cultivation;

Shifting cultivation and livelihoods

Peasant farming: small scale rice-farming in plains and hills, terrace farming, organic farming, land tenancy and rising landlessness in the region

Plantation farming in the North-East: Its colonial history, patterns of tea-plantation,

Plantation cropping in Sikkim: Problems and Prospects

Readings:

1. Bhalla, G.S. (2011). *Conditions of Indian Peasantry*, New Delhi: National Book Trust, India
2. Bhalla, G. S. and Gurmail, S. (2001). *Indian Agriculture: Four Decades of Development*, New Delhi: Sage Publications,.
3. Burmon, A.K. (1977). "Tribal Agriculture in the North-Eastern Hill Region", *Social Scientist*, Vol. 6, No. 3, pp. 61-68.
4. Chakrabarti, A. (2011). "Transhumance, Livelihood and Sustainable Development and Conflict between Formal Institution and Communal Governance: An Evaluative Note on East Himalayan State of Sikkim, India, *IPEDR*, Vol. 5, LACSIT Press, Singapore, pp. VI-1 to VI-7.
5. Gupta, R.D. (1986), "From Peasants and Tribesmen to Plantation Workers: Colonial Capitalism, Reproduction of Labour Power and Proletarianisation in North-East India, 1850s to 1947", *Economic and Political Weekly*, Vol. XXI, No. 4, pp. PE2 to PE10.
6. Mohammad, N (1992). *New Dimensions in Agricultural Geography* (Volume I to VIII). New Delhi: Concept Publishing Company
7. Shaffi, M. (2000). *Agricultural Geography of South Asia*, New Delhi: Macmillan India Ltd.,
8. Vaidya, B.C. (1997). *Agricultural Landuse in India*, Delhi: Manak Publications Pvt. Ltd.
9. Sachchidananda (1989). *Shifting Cultivation in India*, New Delhi: Concept Publishing Company
10. Singh, S. (2012). "New Markets for Smallholders in India: Exclusion, Policy and Mechanisms", *Economic and Political Weekly*, Vol. XLVII, No. 52, pp. 95-105.

GEO-PG-E-404: Geography of Natural Resources

Unit I: Definition, scope and classification of resources

Natural resources and human societies, Global distribution of natural resources, Club of Rome studies and limits to availability of natural resources, Political economy of global natural resources, in respect to oil and oceanic resources

Unit II: Global distribution of energy resources

Coal, oil, natural gas and hydro-power resources, the energy deficit and surplus areas
 Global energy trade and situation of India in global energy scenario
 Global distribution of principal minerals: Ferrous (Iron), Non-ferrous (Aluminum) and Noble metals (Copper) India's production, distribution and consumption of principal minerals (Iron, Aluminum & Copper)

Unit III: Forest and Biodiversity resources and their significance to human societies

Global distribution of forest resources; The Equatorial Rainforests, the Tropics, the mid-latitude and high latitude forests; forest products and global trade, India's forest resources and their conservation, Significance of global fresh-water resources, confined, flowing and ground-water resources; their distribution, Identification of chronically water deficit and surplus areas; India's situation in global fresh-water resources

Unit IV: Concept and principles of conservation of resources

Recycling, efficient and multiple-use of natural resources, Principles of Sustainable Development and the Brundtland Report, Economic efficiencies and trade-offs in conservation strategies, Public policies for conservation strategies, market forces, fiscal methods, incentive systems and regulatory systems of management, India's resource management policies (energy, minerals, forests and water resources)

Readings:

1. Bruntland, G. (1987). *Our Common Future, World Commission on Environment & Development*. Oxford: Oxford University Press
2. Eherlich & Eherlich. (1977). *Ecoscience: Population Resource and Environment*. San Francisco: W.H. Freeman
3. Meadows, P. et. al.. (1972). *The Limits to Growth*, New York: Universe Books.
4. Mathew, R. Simons (2000). Revisiting the Limits to Growth: Could the Club of Rome Have Been Correct, After all? (Part I); Published by Great Change.org, Archived Sep 30
5. Sunil Munshi(1984) *Resource, regions and regional disparity in India*, New Delhi: People's Publishing house.
6. Barma, H. Naazneen and Kai Kaiser (2012). *Rents to Riches? The political Economy of Natural Resources led Development*, Washington D.C: the World Bank.
7. Gadgil, Madhav and RamachandraGuha (2000). *The use and abuse of nature*, New Delhi: Oxford University Press
8. Temel, Bulent (2012). From Value to Power: the Rise of Oil as a Political Economic Commodity, Turkish Economic Association, Discussion Paper, July.
9. Collier, Paul (2010). *The Political Economy of Natural Resources, Social Research*, Vol 77, No. 4, Winter
10. Kate, R.W and Ian Burton (1986). *Geography, Resources and Environment Vol.II.* (ed). Chicago: Chicago University Press.

GEO-PG-E-405: Urban Geography**Unit I: Understanding Urban Geography**

Nature and scope of urban geography; Concepts and Theory in Urban Geography; Preconditions for urban growth; Theories of Urban origins; Early Urban Hearths; Spread of urbanism; Urban Revival in Western Europe; Nature of the cities during ancient, medieval and modern times

Unit II: The Global Context of Urbanisation and Urban Change

Urbanisation of the globe, Changing Distribution of world's Urban population; Causes of Urban Growth, Megacities and Million Cities; urbanisation and Economic Growth; the urbanisation cycle; Types of urban regions; Urban morphology; Changing city landuse, urban sprawl and urban fringes

Unit III: Processes and outcomes of Urbanisation in India

Urbanisation and Urban expansion in India; Distortions in urban system; Economic base; functional classification of towns; Problems of small and medium towns in India; Indian Mega-cities

Unit IV: Contemporary cities

Contemporary issues in urban India: a) urban infrastructure b) housing, slums and urban poor; c) urban governance
Urban environment: pollutions, heat island, urban flooding and urban crimes;
Policy responses: City planning, JNNURM, Smart Cities and other relevant policies

Readings:

1. Bhattacharya, B. (2006). *Urban Development in India: Since Pre-historic Times,(edited)* New Delhi: Concept Publishing Company.

2. Carter, Harold (1995). *The Study of Urban Geography*. London: Arnold
3. Gavin, Shatkin (2014). *Contesting the Indian City: Global Visions and the Politics of Local, (edited)* New York: Wiley Blackwell.
4. Hall, Tim (1998). *Urban Geography*. London: Routledge
5. Jonas, Andrew E. G., Eugene McCann and Mary Thomas (2015). *Urban Geography: A Critical Introduction*. Boston: Wiley-Blackwell
6. Kaplan, Dave H. and Steven Holloway (2014). *Urban Geography*. Boston: Wiley-Blackwell
7. Harvey, D. (1973). *Social Justice and the City*. London: Edward Arnold.
8. Mayer, J. M. & C.F. Kohn (eds., 1959). *Readings in Urban Geography*. Chicago: University of California Press.
9. Pacione, Michael (2005). *Urban Geography: A Global Perspective*. New York: Routledge
10. Ramachandran, R. (1993). *Urbanisation and Urban Systems of India*. New Delhi: Oxford University Press.

GEO-PG-E-406 Social and Cultural Geography with special reference to India and North-East India

Unit I: Social Geography- evolution and relevance

Definition: Nature and Scope and evolution of Social Geography in the Anglo-Saxon World, Society and Environment, Social Evolution, Social Structure, Social Diversity and Plurality (Examples should be drawn from North-East India, as far as practicable)

Unit II: Concepts and themes

Social Space and Social Area Analysis, Social exclusion and Social Justice; Geography of Social Well-being, Social Pathology and Social Action (Examples should be drawn from North East India, as far as practicable)

Unit III: Cultural Geography

Definition, Scope and evolution of Cultural Geography Concepts of Culture –Traits, Diffusion, Acculturation.

Themes and Concepts in Cultural Geography: Culture Area, Cultural Region, Cultural Diffusion and Assimilation, Cultural ecology, Cultural Interaction, Cultural Landscape.

Unit IV: Components of Cultural Geography

Types and Pattern of World Cultural regions: Language, Religion, Ethnicity; Cultures and cultural regions in North East India in particular reference to religion; Ethnicities in North-East

Readings:

1. Ahmad, A. (1999). *Social Geography*. Jaipur: Rawat Publications.

2. Crang, Mike (2013). *Cultural Geography*. London: Routledge.
3. Dreze, Jean and A. Sen (2004). *An Uncertain Glory: India and its Contradiction*. New Delhi: Penguin India
4. Eyles, John (1979). *An Introduction to Social Geography*, London: OUP
5. Mitchell, D. (2000). *Cultural Geography: A Critical Introduction*, Oxford: Blackwell Publishers Ltd.
6. Price, M., and M. Lewis (1993). "The Reinvention of Cultural Geography". *Annals of the Association of American Geographers*, 83 (1):1-17.
7. Robertson, I. and Richards, P. (2003). (eds.): *Studying Cultural Landscapes*. London: Arnold
8. Subbarao, Bendapudi (1958). *The Personality of India, Faculty of Arts*, Baroda: MS University
9. Khilnani, Sunil (2004). *The Idea of India*. Delhi: Penguin India
10. Thrift, Nigel (2005) *Cultural Geography: Critical Concepts in the social Sciences*. London: Rutledge

GEO-PG-E-407: Geography of Social Well-being

Unit I: Formulation of welfare geography

Welfare theme in human geography, Welfare Geography and Social Well Being: Theoretical approaches and development; Well-being and Level of Living, Discrimination, Deprivation and Poverty: Concept of absolute and relative deprivation, Social differentiation, Discrimination, Deprivation and exclusion, patterns of rural and urban poverty

Unit II: Indicators of Social Well-being

Economic vs Social Indicators of Well-being, Social Indicators Movement, Establishing criteria of Social Well-being and Terrestrial Well-being, Identification and choice of Indicators, Changing Social Priorities, Social Reporting and Planning, Terrestrial Social Indicators, Exclusion of Indicators of Well-Being.

Unit III: Education and Well-being

Concept of human resource development: Education and human resource development, education and enlarging choices, empowerment and wellbeing
 Education and literacy in developing countries, Social and spatial disparity in literacy attainment in India, female literacy in India, regional variations, social access to education
 Education, occupational changes, employment and un-employment in India
 Education and social change

Unit IV: Health and Well-being

Health and social wellbeing; health care systems (public and private) in India; Disparity in healthcare provision in India.
 Disease, disease prevalence and disease ecologies in India; Environment and health with special reference to large urban areas of India; Occupational health and associated risks; Poverty and health in India

Readings:

1. Akhtar, R. and Izhar, N. (2010), *Global Medical Geography* (ed.), New Delhi: Rawat Publications
2. Butola, B.S. (2004). "Spatial Distribution of Crimes against Women in India: A Study in Crime Geography", *The Deccan Geographer*, Vol. 42, No.2, pp.25-34.
3. Elling, R.H. (1981). "The Capitalist World-System and International Health", *International Journal of Health Services*, Vol 11, No. 1, pp.21-51.
4. Dreze, J. (2016). *Social Policy (Readings on the Economy, Polity and Society)*, New Delhi: Orient BlackSwan,
5. Hasan, Z. & Hasan, M. (2013). *India: Social Development Report* (ed.), Council for Social Development, New Delhi: Oxford University Press.
6. Kundu, A. Mohanan, P.C. & Varghese, K. (2013). "Spatial and Social Inequalities in Human Development: India in the Global Context", *United Nations Development Programme* (UNDP), New Delhi.
7. Samaddar, R. & Begum, A.A. (2014). "New Fault Line in Conflict? Women's Emergence as the Subject of Peace in the North-East", *Economic and Political Weekly*, Vol. XLIX, No. 43 & 44, pp. 74-83.
8. Smith, D. (1971). *The Geography of Social Well-Being in the United States: An Introduction to Territorial Social Indicators*, New Delhi: McGraw Hill Book Company
9. Sujatha, V. & Srivastava, R. (2007). *Learning from the Poor: Findings from Participatory Poverty Assessments in India*, Manila: Asian Development Bank
10. Tilak, J.B. (2013). *Higher Education in India: In Search of Equality, Quality and Quantity (Readings on the Economy, Polity and Society)*, New Delhi: Orient BlackSwan,.

GEO-PG-E-408**Political Geography with special reference India and East and South-East Asia****Unit I: Fundamental concepts of political geography**

Emergence and development of political geography: History, Definition, and Scope
Approaches to study political geography: World System, Power, State and Feminist
Electoral Geography-Basic Concepts

Unit II: Concepts and Theories

Concept and theories: Nation, Nation-state, State, and Nationalism (Concept of organic state-
Ratzel, Spencer and Schaffle; Nation - Primordialist and Constructivist Approaches)
Frontiers, Borders and Boundaries
Geopolitics: Theory of Heartland, Rimland, Crush zone and Sea Power Geo-strategy, Critical
Geopolitics

Unit III: India and its Geopolitical Perspective

Politico-geographic factors in the rise of Indian federalism; identity and identity politics
India and its geopolitical perspective
Geopolitical significance of the Indian Ocean, problems and prospects

Unit IV: India's North-East and South East Asia

India's North-east and neighbouring countries: borders, boundaries; agreements and disputes
with China, Myanmar and Bangladesh
India's Look-East Policy, transport and trade expansion with China, ASEAN countries, free-
trade agreements

Rise of China as an economic power-house and relationship with India: North-East perspective

Readings:

1. Flint, Colin, and Peter J. Taylor. (2007). *Political geography: World-economy, nation-state, and locality*. Edinburgh: Pearson Education
2. Gallaher, Carolyn, Carl T. Dahlman, Mary Gilmartin, Alison Mountz, and Peter Shirlow. (2009). *Key concepts in political geography*. London: Sage
3. Agnew, John A., Katharyne Mitchell, and Gerard Toal, (2008). *A companion to political geography*,(ed.) New Jersey: John Wiley & Sons.
4. Dikshit, Ramesh Dutta. (2000). *Political Geography: The spatiality of Politics 3E*. New Delhi: Tata McGraw-Hill Education.
5. Prescott, John Robert Victor (2014). *Political Frontiers and Boundaries (Routledge Library Editions: Political Geography)*. Vol. 12. New York: Routledge
6. Agnew, John, and Luca Muscarà. (2012). *Making political geography*. Boston: Rowman & Littlefield Publishers
7. Chapman, Graham P., and Kathleen M. Baker, (1992)) *The changing geography of Asia, (ed.)*. New York: Routledge.
8. Gopalakrishnan, Ramamoorthy. (1991). *Political Geography of India's North East*. Delhi: Har-Anand & Vikas Pub. House
9. Ahmed, Rafiul, and Prasenjit Biswas (2011). *Political economy of underdevelopment of North-East India*. New Delhi: Akansha
10. Short, John.R (1993). *An Introduction to Political Geography 2E*. London: Routledge

GEO-PG-E-409: Geography of Borderland with special reference to North-East India

Unit-I: Concepts and Typology

Concepts, Theories, Typology of Borders, Border and trans-border region, problems of Border studies.

Unit-II: Trans-Border Interactions

Borderland societies and cross-border-cultural Identities, Trans Border Mobility, Border Management-border and trans-border policies.

Unit-III: Borders of North-East India: Issues & Challenges

Case studies: Indo-Myanmar, Borders in the Eastern Himalaya, Indo-Bangladesh Border

Unit-IV: Trade, Communication and Conflicts

Border and Trans-border network and linkages. Border Trade, *Haats* and Trade through borders, Informal Trade. Channels of communication in Border areas. Borders and conflict resolution

Readings:

1. Sevastianov, S.V & Jussi P. Laine, Anton A. Kireev(2015). *Introduction to Border studie.*, Vladivostok: Far Eastern Fedral University,
2. Bose, Sugata& Ayesha Jalal: (2004). *Modern South Asia: History, Culture, Political Economy*, (2nd Ed.) New York: Routledge Publication, 2004
3. Schiff, Maurice &L. Alan Winters (2003). *Regional Integration and Development*. Washington: World Bank Publication,
4. Helliwell, J. (1998). *How much do National Borders Matter?*, New York: Brookings Institution Press,
5. Newman, D. (2002). "The lines that separate: boundaries and borders in political geography." In *A Companion to Political Geography*, edited by John Agnew and Gerard Toal, 23–43. Oxford: Blackwell
6. Newman, D. (2012). "Contemporary Research Agendas in Border Studies: An Overview." In *Ashgate Research Companion to Border Studies*, edited by Doris Wastl-Water, 33–47. Farnham: Ashgate Publishers
7. Thant, Myint-U (2008). *The river of Lost Foot Steps: A personal History of Burma*. New York: Faber and Faber Limited
8. Thant, Myint-U (2012). *Where China Meets India: Burma and the New Crossroads of Asia*. London: Faber and Faber Limited
9. James, C. Scott (2011). ***The Art of Not Being Governed: An Anarchist History of Upland Southeast Asia***. New Haven: Yale University Press.
10. Rothenberg, Paula S. (2005). *Beyond Borders: Thinking Critically About Global Issues*. Boston: Worth Publishers

GEO-PG-E-410: Gender and Space

Unit I: Conceptualizing Gender within Geography

Social construction of the feminine and masculine, Development of and theoretical approaches to the study of Gender in geography;
Examining Gender in relation to space: Division of space in to private and public spaces, Gendered environments, gendered access to and experience of space; spatial variations in the construction of gender

Unit II: Spatial Patterns and modes of Gender discrimination and inequalities

Patriarchy, Matriarchy, Matriliney and Matrilocality, Gender and social values;
Social space and gender, creation of gendered space and reproduction of gendered space

Unit III: Gender disparities in education and health

Global pattern and the Indian situation;
Women in occupations and employment, social assignments of work and work preferences
Crime against women (home and work environment), gender stereotypes and representation in media

Unit IV: Gender identity, gender relationships, strategic and practical domains

Gender Policy and practice in India;
Problems of empowerment of women in India
Gender and development

Readings:

1. Women and Geography Study Group. (1984). *Geography and gender: an introduction to feminist geography*. London: Hutchinson Education
2. Gillian, Rose. (1993). *Feminism and Geography: the limits of geographical knowledge*. Minnesota: University of Minnesota Press
3. McDowell, Linda. (1999). *Gender, identity and place: Understanding feminist geographies*. Minnesota: University of Minnesota Press
4. McDowell, Linda. (1992). "Doing gender: feminism, feminists and research methods in human geography." *Transactions of the institute of British Geographers*: 399-416.
5. Raju, Saraswati. (2011). *Gendered Geographies: Space and Place in the South Asia, (ed.)*. New Delhi: Oxford University Press.
6. Raju, Saraswati, and Kuntala Lahiri-Dutt. (2011). *Doing gender, doing geography: emerging research in India, (ed.)*. London: Routledge
7. Agarwal, Bina. (1994). *A field of one's own: Gender and land rights in South Asia*. Vol. 58. Cambridge: Cambridge University Press
8. Ghadially, Rehana, (2007). *Urban women in contemporary India: a reader, (ed.)*. New Delhi: Sage Publications.
9. Mies, Maria. (1998). *Patriarchy and accumulation on a world scale: Women in the international division of labour*. New York: Palgrave Macmillan.
10. Nongbri, Tiplut. (2003). *Development, ethnicity and gender: select essays on tribes in India*. Jaipur: Rawat Publications

GEO-PG-C-411 FIELDWORK AND DISSERTATION

Unit-I: Pre-Fieldwork Phase

Ideas and importance of fieldwork in Human and Physical Geography, selection of research theme and location, nature of data in geographical research, methods and techniques of data collection, operational and ethical issues in fieldwork.

Unit-II: Fieldwork Phase

Hands on training and teamwork skills- interacting with respondents, modes of observation, types or modes of collection of data, error finding and rectification, distribution of collective responsibilities, *preparation of daily schedule*

Unit-III: Post-Fieldwork

Storing, cleaning and tabulation of data, Analysis, interpretation and presentation of data, Report Writing-types & stages of report, format of writing and referencing.

Unit-IV: Presentation and Evaluation

Note: The Field work is to be of 2 to 3 weeks. It should preferably be taken to anywhere in the North-East India or Himalaya in keeping with the thrust areas of the department. The Department should have field work equipment (including kitchen utensils, stoves, tents and sleeping bags etc).

Tour shall be undertaken during the winter vacation after the Semester-III examination. The students shall submit dissertations and defend their methodologies and findings before the entire faculty plus one external examiner at the end of the IV semester. The average of marks given by

internal faculty members shall be counted out of 50% and the external examiner shall mark out of the remaining 50%.

Readings:

1. Gomez, B. and J.P. Jones III (2010). *Research Methods in Geography: A critical Introduction*. West Sussex: Wiley-Blackwell
2. Amit, V. (1999). *Constructing the Field*. London: Routledge.
3. Bechhofer, F. and L. Paterson. (2000). *Principles of Research Design in the Social Sciences*. London: Routledge.
4. Lindsay, J.M (1997). *Techniques in Human Geography*. London: Routledge.
5. Pile, S (1991) Practicing Interpretative Geography. *Transactions of the Institute of British Geographer*, New Series (Vol.16, No.4, pp.458-469. The Royal Geographical Society
6. Herbert, S (2000) *For Ethnography*. *Progress in Human Geography*. 24(4).pp.550-568. London: Sage Publications
7. Beteille, A. and T. N. Madan. (1975). *Encounter and Experience*. New Delhi: Vikas.
8. Burgess, R. G. (1984). *In the Field: An Introduction to Field Research*. London: Routledge.
9. **Phillips, Richard (2012). *Fieldwork for Human Geography*. London: Sage publishing**
10. Gerber, Rod and Goh Kim Chuan (2000). *Fieldwork in Geography: Reflections, Perspectives and Actions*. (ed.). New York: Springer