

# Department of Geography

Faculty of Natural Sciences

JAMIA MILLIA ISLAMIA

NEW DELHI – 110 025

(A Central University by an Act of Parliament)



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Ph.D Programme-Geography

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Syllabus (w.e.f..2010-2011)

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## Course Structure of PhD Programme

### (Semester-I)

Theory Papers		Credits
<b>(Compulsory)</b>		
<b>PAPER I:</b>	<b>GGD-201</b> Research Methodology	4
<b>PAPER II:</b>	Literature Review	2
<b>(Any one of the following)</b>		
<b>PAPER III:</b>	<b>GGD-202:</b> Environmental studies	4
<b>PAPER IV:</b>	<b>GGD-203</b> Population, Social and Gender Geography	4
<b>PAPER V:</b>	<b>GGD-204</b> Urban geography and Environment	4
<b>PAPER VI:</b>	<b>GGD-205</b> Agricultural Geography	4
<b>PAPER VII:</b>	<b>GGD-206</b> Geography of Health and Well-Being	4

## PAPER I: GGD-201

### RESEARCH METHODOLOGY

Credit: 4

#### UNIT-1: INTRODUCTION

Epistemology: Science as the way of knowing; Reality: Objective and subjective; Basic Concepts: Abstraction, observations and measurements; Rationality: Limits of human mind; Natural and social laws; Objectivity and verifiability; Induction and deduction; Hypothesis, models and theory.

#### UNIT-2: SCIENTIFIC METHOD

Socratic (Classical) method vs. conventional scientific method; Steps in conventional scientific method; Evaluation of theory: Criteria and characteristics; Critical thinking.

#### UNIT-3: METHODS OF DATA COLLECTION

Sample design and sampling techniques; Instrumental measurements; Collection and preservation of samples from natural environment; Schedules, questionnaires and interviews: Purpose, types and essentials; Agent-base information, oral tradition, memoirs, diaries, news paper and texts.

#### UNIT-4: METHODS OF DATA ANALYSIS

Empiricism and logical positivism: Statistical and mathematical induction and determinism (cause and effect analysis); Models and analogies: Statistical and mathematical models, simulation and analogies in physical and human geography.

#### Books recommended :

1. Andres, A.C. (1987) : The Analogy Theme in Geography; *Journal of Geography* 86 (55) : 194-197
2. Campbell, D.T. eds. And Overman, E.S.(1988): *Methodology and Epistemology for Social Science*: Chicago: The University of Chicago Press
3. Crano, W.D. and Brewer, M.B. (2002) : *Principles and Methods of Social Research*; New York : Routledge
4. Czaja, R. and Blair, J. (1996) : *Designing Surveys*; Thousand Oaks : Pine Forge Press
5. Denzin, N.K. and Lincoln, Y.S. eds. (1994) : *Handsood of Qualitative Research*; Thousand Oaks : Sage
6. Fowler, F.J. (1995) : *Improving Survey Questions*; Thousand Oaks : Sage
7. Gomez, B and J Jones III J.P. eds. (2010) : *Research Methods in Geography: A critical Introduction*; West Sussex : Wiley-Blackwell

8. Hay, I. ed. (2000) : *Qualitative Research Methods in Human Geography*;  
Oxford : Oxford University Press
9. Hemper, C.G. ed. (1983): *Methodology, Epistemology, and Philosophy of Science*;  
New York : Springer
10. Limb, M. and Dwyer, C. eds. (2001) : *Qualitative Methodologies for Geography*;  
London : Arnold.
11. Livingstone, D.N., and Withers, C.W. (2005) : *Geography and Revolution*;  
Chicago : The University of Chicago Press
12. Montello, D.R., and Suttor, P.C. (2006): *An Introduction to Scientific Research  
Methods in Geography*; New Delhi : Sage Publications India Pvt. Ltd.,
13. Rahman, S., Symon, J, and Gabby D.M. Van Bendogem, J.P.eds. (2009): *Logic  
Epistemology and the University of Science*; New York: Springer
14. Scim, S. and ed. (2005) *The Routledge Companion to Postmodernism*; New York:  
Routledge
15. Valentine, G. and Chifford, N. eds. (2010) : *Key Methods in Geography*; New Delhi:  
Sage Publications Pvt. Ltd.

## PAPER III: GGD-202

### ENVIRONMENTAL STUDIES

Credit: 4

#### UNIT-1: INTRODUCTION

Earth as a complex system: Components and their interrelations; Environment as resource field and sink; Environmental crisis: Causes and manifestations; Environmentalism and green movements; Major global environmental issues.

#### UNIT-2: ENVIRONMENT AND DEVELOPMENT

Conventional and ecological economics; Production and consumption spiral; Impacts on ecosystems; Sustainable development: Is sustainability an impossibility theorem?

#### UNIT-3: ENVIRONMENTAL RISK ASSESSMENT

Perception, assessment and evaluation of environmental risks; Environmental impact assessment (EIA) and uncertainty; EIA practices around the world; EIA procedure in India; Adaptation to global environmental change.

#### UNIT-4: ENVIRONMENTAL MANAGEMENT

Agenda 21; Globalisation and environment; Political economy of resource use and environmental management; Environmental management strategies at sub-national level: Integrated watershed and eco-region management; Management at local level: Municipal water supply management; Conservation and restoration of forest cover and organic farming at *panchayat* level.

#### Books recommended:

1. Bailey, R.G. (2002) : *Ecoregions : Design for Sustainability*; New York: Springer Science & Business.
2. Bailey, R.G. and Ropes, L. (2007): *Ecoregions : The Ecosystem in Geography of the Oceans and Continents*; New York : Springer
3. Chiras, D.D. (2010): *Environmental Science*; London: Jones and Bartlett Publishers International
4. Common, M.S. and A Stage, S. (2005): *Ecological Economics: An Introduction*; Cambridge: Cambridge University Press.
5. Daly, H. E. ad Farley, J. (2004) : *Ecological Economics : Principles and Applications*; Washington, D.C.: Island Press
6. Dupont R., Baxter, T.E. and Theodore, L. (1998): *Environmental Management: Problems and Solutions*; Florida : CRC Press

7. Edwards A.R.: (2005): *The Sustainability Revolution : Portrait of a Paradigm Shift*; Gabrio Island (Canada) : New Society Publishers
8. Enger, E.D. and Smith, B. (2009): *Environmental Science : A study of Interrelationships*; New York: McGraw-Hill
9. Heathcote, I.W, (2009): *Integrated Watershed Management: Principles and Practice*; New Jersey : John Wiley & Sons Inc.
10. Krishnamurthy, B. (2005): *Environmental Management*; New Delhi : Prentice Hall of India Pvt. Ltd.
11. Kump, L.R., Kasting, J.M., and Crane, R.G. (2009): *The Earth System*; New Jersey: Prentice Hall
12. McKinney, M.L., Schoch, R.M. and Yonavjak, L.(2007): *Environmental Science: Systems and Solutions*; London: Jones and Barclatt Publishers International
13. Naiman, R.J. ed, (1994): *Watershed Management: Balancing Sustainability and Environmental Change*; New York: Springer
14. Randle, T.O. (2007): *Watershed Management: Issues and Approaches*; London: IWA Publishing
15. Russo, M.V. (2008): *Environmental Management: Reading and Cases*; Thousand Oaks: Sage

## PAPER IV: GGD-203

### Population, Social and Gender Geography Credit: 4

#### Unit – I

Population Geography as a sub discipline of Geography and distinct from population studies and demography; Sources of population data; Measures of population growth and world patterns of population growth; Geographical factors of population growth; Population dynamics and population theories.

#### Unit – II

Social Geography as a sub discipline of Geography and its relationship with other social sciences; Concept of social space, territorial space and social landscape; Socio-economic and environment problems of developing and developed nations; S.C., S.T. and OBCs in India : Issues and challenges; Regional variations in literacy, health and crimes in India.

#### Unit – III

Growth and development of gender geography; Approaches : Behavioural, Radical, Humanistic and Welfare; Status of women in developing and developed countries; Crimes against women and bridging the gender gap; Women empowerment and role of women in environmental management.

#### Unit – IV

Population problems of India : Population Planning and Human Resource Management; Population dynamics and its changing paradigms; Unifying elements in cultural diversity; Centre state relationship and growth of regionalism; Women participation in economic activities.

#### Books recommended:

1. Boserup, E. 1989, Women's Role in Economic Development, Earthscan, London.
2. Dankelman, I & Davidson, J., 1989. Women and Environment in the Third World, Earthscan, London.
3. Debilig, H.J., 1996, Human Geography-Culture, Society and Space (5<sup>th</sup> ed.), John Wiley, New York.
4. Johnston, R.J. et. Al (eds), 1996. The Health of Women – A Global Respective, Westview press, Boulder.
5. Momsen, J.H. & Townsend, J. (eds.), 1987. Geography of Gender in the Third World, Albany, New York.
6. & Hunt, Dubuque, Iowa.
7. Sowell, T. 1994. Race and Culture – A World View, Basic Books, New York.
8. UNICEF, 1990. The Lesser Child – the Girl in India, United Nations, Geneva.
9. United Nations, 1991. The World's Women, 1970-1990, United Nations, New York.
10. United Nations, 1995, World Resources 1994-1995, Chapter 3 : Women and Sustainable Development, United Nations, New York.
11. Abuzar, M., 1988. Socio-economic Aspects of Population Structure, Rawat Pub., Jaipur.
12. Agarwal, S.N., 1972. India's Population Problems, Tata McGraw Hill, New Delhi.
13. Beajeu-Garneir, J., 1979, Geography of Population, Longman, New York.
14. Bogue, D.J., 1969, Principles of Demography, John Wiley, New York.
15. Chandna, R.C., 2000 Geography of Population : Concept, Determinants and Patterns, Kalyani Publishers, New Delhi.
16. Clarke, J.I., 1973, Population Geography, Pregamon Press, Oxford.

17. Coontz, S.H., 1957, Population Theories and the Economic Interpretation, Rouledge & Kegan Paul.
18. Daugherty, H.G. Kenneth, C.W. Kammeyir, 1988. An Introduction to Population (Second edition), The Gulford Press, London.
19. Jones, H.R., 1981. A Population Geography, Harper & Row, London.
20. Ahmad, A., 1999. Social Geography, Rawat Publications Jaipur.
21. Dube, S.C. 1991. Indian Societies, National Book Trust of India, New Delhi.
22. Dube, S.C. Tribal Heritage of India, Vikas Publishing Co., New Delhi.
23. Churye, G.S., 1963. The Scheduled Tribes, Popular Prakashan, Bombay.
24. Jones, E., & J. Eyles, 1977. An Introduction to Social Geography, Oxford University Press, Oxford.
25. Jones, E., 1976. An Introduction to Social Geography, Oxford University Press, Oxford.
26. Majumdar, D.N., 1958, Races and Culture of India, Asia Publishing House, Bombay.
27. Mukherjee, R., 1975, Social Indicators, McMillan, Delhi.
28. Pacione, M., 1987. Social Geography : Progress and Prospects, Croom Helm, London.
29. Smith, D., 1977. Geography : A Welfare Approach, Edward Arnold, London.
30. Gregory, D. and J. Larry (eds.) 1985. Social Relations and Spatial Structures, McMillan.

**PAPER V: GGD-204**

**URBAN GEOGRAPHY AND ENVIRONMENT**

**Credit: 4**

**Unit- I Basic Concept and Approaches**

Basic Concepts of Urban/Urbanization; Approaches to the study of Urban Geography; Urban Environment: Concept, Components and Levels of Analysis; Approaches to the study of Urban Environment.

**Unit- II Emerging Issues and Research Trends**

Trends and Patterns of Urbanization in India: Post Independence Period; Functional Classification of Towns; Urban Problems and Environmental Degradation in India; Micro Climate of Cities; Urban Pollution (Air, Water and Noise) and Health Impacts.

**Unit- III Urban and Environmental Planning**

Techniques of Town Planning: Delhi or Chandigarh; Urban Transport Planning; Basis of EIA ; Concept of Urban Sustainability and Urban Environmental Conservation Strategies: International and National Conventions.

**Unit- IV Research Methodology**

Models for Internal Structure, Hierarchy and Spacing of Cities; Urban Sprawl; Urban Poverty and Slums ; Use of Remote Sensing Data for Urban Land uses and Change Detection; GPS and GIS for Urban Mapping; Socio-economic and Environmental Surveys for Urban Themes.

**Books Recommended:**

1. Carter, H., 1972. The Study of Urban Geography, Edward Arnold, London.
2. Choley, R.J.O. and Haggett, P. 1966. Models in Geography, Methuen, London.
3. Gibbs, J.P. 1961, Urban Research Methods, Princeton, New Jersey.
4. Nangia, S., 1976. Delhi Metropolitan Region: A Study in Settlement Geography, Rajesh Publications.
5. Hall, P., 1992. Urban and Regional Planning, Routledge, London.
6. Burgess, R., Marisa C., and Thed K., 1977. The Challenge of Sustainable Cities, Zed Books, New Jersey.
7. Canter, L.W., 1996. Environment Impact Assessment , Mc Graw Hill Inc. New York.
8. Gilbert, and Joseph G., Cities, Poverty and Development-Urbanization in the 3<sup>rd</sup> World, Oxford University Press, Oxford.
9. Knox, P., 1994. Urban Social Geography-An Introduction, Longman, U.K.
10. Goudie, A., 1993. The Human Impact on Natural Environment, Blackwell, USA.

## PAPER VI-GGD-205

### AGRICULTURAL GEOGRAPHY

Credit: 4

#### UNIT-I CONCEPTS AND TECHNIQUES

Approaches to Agricultural Geography; Agricultural regionalization; Agro-climatic regions; New Agricultural technology; Models of agricultural location and their critical evaluation. ; Land Capability Classification.

#### UNIT-II AGRICULTURE AND REGIONAL DEVELOPMENT

Strategies in agricultural planning and development in India ; Agricultural policy and politics of agriculture; Liberalization, privatization and globalization; WTO agreements; Role of IMF and World Bank in agricultural policies; Rural employment; Rural finance and its instruments.

#### UNIT-III AGRICULTURE WITHIN THE FOOD SUPPLY SYSTEM

Food security and its components; Early warning system for food security; Monitoring factors affecting food security: weather, prices, inputs, infrastructure, storage, transportation, public distribution system, stocks, diseases, pests, droughts. Poverty and malnutrition and governmental efforts to address poverty.

#### UNIT -IV RESEARCH METHODOLOGY IN AGRICULTURE

Role of remote sensing, GIS and GPS in agricultural studies; Land Information System Measurement of regional disparities in agriculture and its indicators; Quantification Techniques: Indices of Growth Rates of Agriculture, Crop Combination Regions, Crop Diversification Index, Agricultural Productivity; Crop monitoring using remote sensing data; Forewarning system for pests and diseases; Drought monitoring.

#### BOOK Recommended:

1. George W. Norton, Jeffrey Alwang, William A. Masters (2006) The Economics of Agricultural Development
2. John B. Penson Jr., Oral Capps Jr., C. Parr Rosson, Richard Woodward (2009) Introduction to Agricultural Economics
3. Kym Anderson, Will Martin (Eds.) (2005) Agricultural Trade Reform and the Doha Development Agenda
4. Clapp, J., (2009) Corporate Power in Global Agrifood Governance
5. Ashok Gulati, Tim Kelly (2000) Trade Liberalization and Indian Agriculture
6. Mahbub UL Haq (2003) Human Development in South Asia 2002: Agriculture and Rural Development
7. Finney, D.J., An Introduction to Statistical Science in Agriculture : Axis Books, 2010
8. Bajpai, S., Survey on Indian Agriculture : Cyber Tech Pub, 2009,
9. Khanduri, V.P.(Eds.), Advances in Agricultural Research in India : Vol. XV-XVI, 2001, Jan-Dec. 2001, (Annual Journal) : International Book Distributors, 2001
10. Qazi, S.A. and Qazi, N. S., Population Geography : , A.P.H, 2010,

11. Kothari, S., Agricultural Landuse and Population : A Geographical Analysis : Udaipur, 1999,
12. Ramachandrudu, G., and Rao, M. P, Census 2001 and Human Development in India : Serials Pub, 2004.
13. Baylis Smith, T.P., 1987, The Ecology of Agriculture,
14. Berry, B.J.L., 1976, The Geography of Economic System, Printice Hall, N.Y.
15. Brown, L.R., 1990, The Changing World Food Prospects-The Nineties and Beyond, World Watch Institute, Washington, D. C.
16. Dayson, T., 1996, Population and Food-Global Trends and Future Prospects, Routledge, London.
17. Gregory, H.F., 1970, Geography of Agriculture, Printice Hall, Englewood Cliff, N.Jersey.
18. Hussain, M., 1999, Agricultural Geography, Rawat Publications, Jaipur.
19. Jasbir, S. and Dhillon, S.S., 1988, Agricultural Geography, Tata McGraw Hill, N. Delhi
- Mannion, A.M., 1995, Agriculture and Environment Change, John Wiley, London.
20. Shafi, M., 1983, Agricultural Productivity and Regional Imbalances in Uttar Pradesh, Concept Publications Co. New Delhi.
21. Shafi, M., 2007, Agricultural Geography, Persons Publication, New Delhi

**PAPER VII-GGD-206**  
**GEOGRAPHY OF HEALTH AND WELL BEING**  
**Credit: 4**

**UNIT-I CONCEPTS AND APPROACHES**

Health and wellbeing: Concept, Indicators , Approaches; Burden of disease: Mortality and Morbidity; Organization of Health Services.

**UNIT-II DISEASES AND HEALTH DISORDERS**

General classification of Diseases; Ecology, Etiology and Epidemiology of Diseases: Communicable ( TB, Malaria, HIV/AIDS) and Non Communicable ( Cancer, Diabetes and other life style related health disorders) .

**UNIT-III DRIVERS OF HEALTH DISORDERS**

Poverty; Hunger; Food Insecurity; Population: Crowding, Congestion, Density ,Age and Sex Structure; Literacy and educational levels; Social and Economic Security; Hygiene ; Basic Facilities and Amenities; Health infrastructure.

**UNIT-IV MEASUREMENT OF HEALTH AND HEALTH DISORDERS**

Poverty and Hunger; Hunger Index, SNU and ICMR scale of nutrition , Morbidity, Mortality, BMI, WBI, , HDI; Burden of Disease; Health GIS.

**Suggested readings:**

1. Cliff, A. & Haggett, P. (1989). Atlas of Disease Distribution, Basil Blackwell, Oxford.
2. Digby, A. & Stewart, L. (eds.) (1996). Gender, Health and Weelfare, Routledge, New York.
3. Hazara, J.(ed) (1997). Health care planning in Developing Countries, University of Calcutta, Kolkata.
4. Learmonth, A.T.A.(1978). Patterns of Disease and Hunger, A Study in Medical Geography, David and Charls, Victoria.
5. May, J.M. (1961). Studies in Disease Ecology, Hafner Pub., New York.
6. May, J.M. (1959). Ecology of Human Diseases, M.D. Pub., New York.
7. Narayan, K.V. (1997). Health and Development: Inter-sectoral linkages in India, Rawat Pub., Jaipur.
8. Phillips, D.R.(1990). Health and Health Care in the Third World, Lingman, London.
9. Pyle, G. (1979). Applied Medical Geography, Winston Halsted Press, Silver Spring, USA.
10. Rais, A. and Learmonth, A.T.A., (1985 ). Geographical Aspects of Health and Diseases in India, Concept, New Delhi.
11. Shannon, G.M. et. Al, (1987). The Geography of AIDS, Guiford Press, New York.
12. Smith, D. (1997). Human Geography-A Welfarwe Approach, Arnold Heinemann, London.
13. Izhar, N. (2004). Geography and Health; A study in Medical Geography, Saujanya Books, Delhi.
14. Peter, A. and Hazen, H. (2011). An Introduction to the Geography of Health, Routledge, New York.
15. Takehito, T. (ed.) (2003). Health Cities and Urban Policy Research, Routledge, New York.
16. Wilbert, M.G. & Robin, A.K. (2001). Culture/ Place/ Health, Routledge, New York.
17. [http://en.wikipedia.org/wiki/Health\\_geography](http://en.wikipedia.org/wiki/Health_geography)
18. <http://www.esri.com/industries/health/geomedicine/index.html>