

# **DEPARTMENT OF GEOGRAPHY**

**School of Earth Science**

## **SYLLABUS**

**(Revised)**


**Pre - Ph.D . COURSE**

**(Effective from academic session 2021-22)**

**H.N.B. Garhwal University, Srinagar (Garhwal)**

**(A Central University)**

  
Dean  
School of Earth Science  
H.N.B. Garhwal University  
(A Central University)  
Srinagar (Garhwal)-246174  
Uttarakhand


  
Prof. M.S. Nagi  
Head  
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## SYLLABUS

### **PRE – PH.D . PROGRAMME( ONE SEMESTER COURSE)**

#### **GEOGRAPHY**

Course Code	Paper No.	Title of Course/ Paper	Marks		
			Internal Assessment	End Semester Exam	Credit
SOES /GEG/Ph.D C-001	I	Research Methodology	40	60	04
SOES/GEG/Ph.D C-002	II	Research and Publication Ethics	40	60	03
SOES/GEG/Ph.D	III	Elective ( any one of the following )			
SOES /GEG/Ph.D E-001	III (a)	Geomorphology	40	60	04
SOES/GEG/Ph.D E- 002	III (b)	Population ,Culture and Society	40	60	04
SOES/GEG/Ph.D E-003	III (c )	Environment and Bio-Geography	40	60	04
SOES/GEG/Ph.D E-004	III (d)	Regional Planning and Development	40	60	04
SOES/GEG/Ph.D E-005	III (e)	Settlement Geography	40	60	04
SOES/GEG/Ph.D E-006	III (f)	Geography of Tourism	40	60	04
SOES/GEG/Ph.D E-007	III (g)	Economic Geography	40	60	04
SOES/GEG/Ph.D	IV	Project Report ( Elective) any on the following			
SOES/GEG/Ph.D E-008	IV (a)	Geomorphology	40	60	04
SOES/GEG/Ph.D E-009	IV (b)	Population ,Culture and Society	40	60	04
OES/GEG/Ph.D E-010	IV(c )	Environment and Bio-Geography	40	60	04
SOES/GEG/Ph.D E-011	IV (d)	Regional Planning and Development	40	60	04
SOES/GEG/Ph.D E- 012	IV (e)	Settlement Geography	40	60	04
SOES/GEG/Ph.D E-013	IV(f)	Geography of Tourism	40	60	04
SOES/GEG/Ph.D E-014	IV (g)	Economic Geography	40	60	04

  
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Paper IV SOES/GEG/Ph.D/E-012 (e) Settlement Geography ,  
(Contains : Urban Geography , Urban Problems, Town Planning; Rural Settlement,  
Rural Huse Types, Rural landuse, Rural economy)

Paper IV SOES/GEG/Ph.D/ E-013 (f) Tourism Geography,  
(Contains : Pilgrimage , Adventure, Recreation, Eco-Tourism, Cultural Tourism ,  
Home Stay, Community tourism

Paper IV SOES/GEG/Ph.D/E-014 (g) Economic Geography ,  
(Contains : Agriculture Industrial Geography; Animal Husbandry; Marketing and  
Commercial Geography; Transport .



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### PRE-PH. D. PROGRAMME/ COURSE

There shall be two core courses which shall carry 4 and 3 credits each and two elective courses which shall carry 4 credits each. The theory paper will be of 60 marks and sessional tests shall be of 40 marks. (60+40 = 100).

### CORE COURSE

#### Course I: Research Methodology

**UNIT I :** Meaning and Objective of Research; Types of research; Significance and geographical methods of research; Research problem-selecting the problem; Techniques involving in defining the problem.


**UNIT II:** Hypothesis: Meaning, characteristics and importance of hypothesis in research; Problems in formulating hypothesis; Testing of hypothesis; Research design: Need for research design; Type of research design; Regional method of regions & regionalization; Review of literature.

**UNIT III:** Nature of geographical studies; Case studies; Areas studies; Diagnostic studies and Regional development; Techniques of field study and surveying; Sampling method, steps in sampling and design; Types of sampling method; Collection of primary data with schedule and questionnaires, interview, observation and collection of secondary data.

**UNIT IV:** Thesis writing; Techniques for preparation of maps and diagrams for processed data; Solution of the problem; Remote Sensing and G.I.S. techniques; Use of statistics in the analysis of data; Classification, tabulation, comparison and interpretations of data; Book review, references and preparation of glossary; appendix and bibliography.

#### **Reading Recommended:**

- |                      |   |
|----------------------|---|
| 1. ICSSR             | A survey of research in geography                             |
| 2. Jones             | Field work in Geography, London                               |
| 3. Gupta, S.S. A     | Guide of Field Study, Kolkata                                 |
| 4. J. Anderson, B.M. | Thesis and Assignment writing (New Delhi) Surton and M. Porle |
| 5. Fitzgerald        | Development in Geographical Method C.V.P. 1974(a)             |
| 6. Chorley (ed.)     | Modals in Geographical Research                               |
| 7. Kothari C.R.      | Research Methodology (1988), Willey Publishers, New Delhi     |

  
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**Course II:**

**Research and publication Ethics**

**THEORY**

**UNIT I**

**RPE 01: PHILOSOPHY AND ETHICS (3 hrs.)**

1. Introduction to philosophy: definition, nature and scope, concept, branches
2. Ethics: definition, moral philosophy, nature of moral judgments and reactions

**RPE 02: SCIENTIFIC CONDUCT (5 hrs.)**

1. Ethics with respect to science and research
2. Intellectual honesty and research integrity
3. Scientific misconducts: falsification, fabrication and plagiarism (FFP)
4. Redundant publications: duplicate and overlapping publications, salami slicing
5. Selective reporting and misrepresentation of data

**RPE 03: PUBLICATION ETHICS (7 hrs.)**

1. Publication Ethics: definition, introduction and importance
2. Best practices / standards setting initiatives and guidelines: COPE, WAME, etc.
3. Conflicts of interests
4. Publication misconduct: definition, concept, problems that lead to unethical behavior and vice versa, types.
5. Violation of publication ethics, authorship and contributor ship
6. Identification of publication misconduct, complaints and appeals
7. Predatory publishers and journals

**PRACTICE**

**UNIT II**

**RPE 04: OPEN ACCESS PUBLISHING (4 hrs.)**

1. Open access publications and initiatives
2. SHERPA/RoMEO online resource to check publisher copyright and self- archiving policies
3. Software tool to identify predatory publications developed by SPPU
4. Journal finder/ journal suggestion tools viz. JANE, Elsevier Journal Finder, Springer journal suggerster, etc.

**RPE 05: PUBLICATION MISCONDUCT (4hrs.)**

**A. Group Discussion (2hrs.)**

1. Subject specific ethical issues, FFP, authorship
2. Conflicts of interest
3. Complaints and appeals: examples and fraud from India and abroad

**B. Software Tools (2 hrs.)**

Use of plagiarism software like Turnitin, Urkund and other open source software tools

**RPE 06: DATABASE AND RESEARCH METRICS (7 hrs.)**

**A. Database (4 hrs.)**

1. Indexing database
2. Citation database: Web of science, scopus, etc.

**B. Research Metrics (3 hrs.)**

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1. Impact factor of journal as per Journal citation report, SNIP, SJR, IPP, Cite Score
2. Metrics: h-index, g-index, i10 index, altmetrics

**UNIT III:** Computer Application And Modeling : GIS, Mapping, Data Storage and Analysis, Software use in Mapping: QGIS, ARIDAS, ATOCAD, ARC, SPSS.

### **Readings Recommended:**

1. Bird, A. (2006). Philosophy of Science. Routledge.
2. MacIntyre, Alasdair (1967) A Short History of Ethics. London.
3. P. Chaddah, (2018) Ethics in competitive Research: Do not get scooped; do not get plagiarized, ISBN:978-9387480865
4. National Academy of Sciences, National Academy of Engineering and Institute of Medicine. (2009). On being a scientist: A guide to responsible conduct in research: Third edition. National Academic Press.
5. Resnik, D.B. (2011). What is ethics in research and why is it important. National Institute of environmental Health Sciences, 1-10. Retrieved from <http://www.niehs.nih.gov/research/resources/bioethics/whatis/index.cfm>
6. Beall, J. (2012). Predatory publishers are corrupting open access. Nature, 489(7415), 179-179. <https://doi.org/10.1038/489179a>
7. Indian National Science Academy (INSA), Ethics in Science Education, Research and Governance (2019), ISBN: 978-81-939482-1-7. [http://www.insaindia.res.in/pdf/Ethics\\_Book.pdf](http://www.insaindia.res.in/pdf/Ethics_Book.pdf)

### **ELECTIVE COURSE**

The candidates are required to opt any one group of courses.

#### **Course III (a): Geomorphology**

UNIT - I: Definition, scope and significance of Geomorphology; Concepts and methods in contemporary Geomorphology; Recent trends in Geomorphology; Techniques of geomorphologic mapping and topographical analysis, Terrain classification.

UNIT - II: Major processes of landscape sculpture under different climatic environments: Mass movement, hill slope erosion, fluvial, glacial and periglacial processes and resulting landforms; Morphometry: linear, areal and relief aspect; Drainage basin analysis; serial and areal presentation of morphology.

UNIT III: Landscape development; Structural landforms; Slope analysis; Application of Geomorphology in resource utilization and environmental management; Applied Geomorphology; Regional Geomorphology with special reference to Uttarakhand Himalaya.

UNIT IV: Meaning, scope and practical utility of Hydrology; Sources of hydrological data; Hydrograph analysis; Water balance; Man's influence on the hydrologic cycle; Drainage basin studies; Hydrologic budget equations; Evaporation control; Hydrological provinces of India.



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**Readings recommended:**

- |                                 |   |   |
|---------------------------------|---|---|
| 1. King, C.A.M.                 | : | Techniques in Geomorphology               |
| 2. Thornbury, W.D.              | : | Principles of Geomorphology               |
| 3. Tricart, J.                  | : | Structural Geomorphology                  |
| 4. Thorn, Colin, E.             | : | Introduction of Theoretical Geomorphology |
| 5. Ward, R.C.                   | : | Principles of Hydrology                   |
| 6. Wilson, E.N.                 | : | Engineering Hydrology                     |
| 7. Wister&Beater                | : | Hydrology                                 |
| 8. Cooke, R.V. & Doorn, K.J.C.: |   | Geomorphology in Environmental Management |

**Course III (b) Population, Culture and Society**

UNIT I: Population Geography: Concepts and scope ; Components of population growth; Demographic characterization; Migration types, causes and consequences.

UNIT II: Stationary and stable population; Composition and characteristics of rural and urban population; Socio-economic implication of population.

UNIT III: Population characteristics of developed and developing countries; India's population characteristics and regional variation; Population Planning and policies and development.

UNIT IV: Theories of population growth; Optimum population; Population projection; Population - pressure and population explosion; Population of declining and zero growth; Population resources regions.

**Readings recommended:**

- |                     |   |   |
|---------------------|---|---|
| 1. Bosh, Ashish     | : | Population in India's development , Vikas, New Delhi              |
| 2. Chandna R.C.     | : | Geography Of Population, Kalyani Publication, New Delhi           |
| 3. Champion, T.     | : | Population Matters, Paul Champion, London                         |
| 4. Johnes, S.R.     | : | Population Geography, Paul champion, London                       |
| 5. Pathak, L.P.     | : | Population Studies, Rawat Publication , Jaipur                    |
| 6. Trewartha, G. T. | : | A Geography of Population - World Patterns, John Willy, New York. |
| 7. Zelinsky, Wilber | : | Geography and Crowding World, Oxford University Press, New York.  |
| 8. Woods, R.        | : | Population Analysis in Geography, Longman, London                 |



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### Course III (c): Environment and Bio- Geography

UNIT I: Nature, scope and significance of environment study, Components and function of ecosystem; Major ecosystems of the earth.

UNIT II: Environment crises, global climatic change; Shrinking of glaciers; El Niño effect; Desertification; Natural hazards; Cultural hazards; Environment issues in mountains with special reference to Uttarakhand.

UNIT III: Concepts and principles of natural resources; Geo-informatics for Natural Resource Management and Strategies.

UNIT IV: Community based Natural Resource Management; Indigenous knowledge for Resource Management; Eco-services; Success stories in Uttarakhand; Natural Resource Management; Natural resources and sustainable development; Biodiversity assessment and conservation.

#### **Readings Recommended:**

1. Environmental change and Sustainable Development in the New Millennium by Dr. Mohan Singh Panwar, published by Research India Press, Sangam Vihar, New Delhi -110062.
2. Medicinal Plants and Sustainable Livelihood by Mohan Singh Panwar, Suresh Kr. Sharma and R.B. Singh, published by RK books, Dariaganj, New Delhi - 11002.
3. Studies in Himalayan Ecology and Development Strategies by Tejvir Singh and Jagdish Kaur published by the English Book store, New Delhi – 110001.
4. Evaluation of watershed in India by G. Sastri et al., published by scientific publishers, Jodhpur – 342001.
5. Rural Poverty assessment and Livelihood Strategies by M. Bishwanath et al. published International Book Distributors, Dehradun-248001
6. The Holy Himalaya, A geographical Interpretation of Garhwal, by Nitya Nand and Kamlesh Kumar, published by Daya publishing house, Delhi – 110006.
7. Watershed Management in Himalaya; Concept and Strategy By B.P. Pandey et al. published Gyanodaya Prakashan, Nainital- 263001

### Course III (d) Regional Planning and Development

UNIT I: Concepts, nature and scope of Regional Planning; Approaches to Regional Planning; Planning Regions – Concept and Types

UNIT II: Regional Planning and National Development; Economic development and regional development; Regional disparity and diversity; Regional economic complexes, Inter-regional and intra-regional functional interactions.



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**UNIT III:** Approaches to Integrated Regional Planning in different levels - Local, regional and national; Planning for tribal, agricultural, Industrial and urban regions.

**UNIT IV:** Planning Regions of India; Regional policies in India; Regional disparities in India; Multi Level Planning in India - state, district and block level planning.

**Readings Suggested:**

1. Mishra, R.P. : Regional development and Planning India, Vikash Publication, New Delhi.
2. Mishra, R.P. : Regional Planning Concepts, Techniques and Policies, concept Publication, New Delhi.
3. Chandna, R.C. : Regional Planning : A Comprehensive Text ; kalyani Pub., New Delhi.
4. Isard, W. : Methods of Regional Analysis; MIT Press, Cambridge.
5. Moseley, M.J. : Growth Centres and Spatial Planning, Pergmon Press of Oxford.
6. Peter Hagett : Locational Analysis in Human Geography, Edward Arnold, London.
7. Fried Mann, J. & A. William : Regional Development and Planning, MIT Press, Masschusaies (USA).

**Course III (e) Settlement Geography**

**UNIT I:** Nature, Scope, definition and significance of Settlement Geography; Human Settlements as a system; Concept and characteristics of rural settlement setting, location, distribution, spacing and nature of dispersion of rural settlement.

**UNIT II:** Types and patterns of settlements; Rural service center's- hierarchy, service area and interaction; Anatomy and characteristics of Indian Villages.

**UNIT III:** Meaning and scope of Urban Geography; Process and trends of Urbanization; Origin and evolution of urban centers; Methodology in urban studies; Size and spacing of cities; Functional classification of towns.

**UNIT IV:** Town Planning; Planned cities of India; Urban Problems- environmental, housing, transportation, crime, urban poverty; National Capital Regions; Million cities of India.

**Readings Recommended:**

1. Singh, O. P. : Nagariya Bhoogol (Hindi), Tara Publication, Varansi.
2. Singh, R. L. : Rural Settlement in monsoon Asia, NASI, Varansi.
3. Tieari, R. C. : Settlement Geography (Hindi), Prayag Pustak Bhavan, Allahabad.
4. Hudson, F.S. : A Geography of Settlements; MC Donald and Evans, New York.
5. Daniel, P. : Geography of Settlements Rawat Pub., Jaipur
6. Singh, S.B. : Rural Settlement Geography, UBBP Pub. Gorakhpur.

  
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7. Mayor and Cohn : Readings in urban Geography, Union of Chicago Press, Chicago.
8. Johnson, J. H. : Urban Geography, Pagan, Oxford.

#### Course IV (f) Tourism Geography

UNIT I: Geography and Tourism; Nature scope and significance of Tourism Geography; Concept of Tourism; Type Of Tourism ; Determination of tourism patterns in India with Special Reference to Himalaya Tourism Promotion Policies and Programs in India.

UNIT II: Tourism Attraction: Switzerland, Singapore, Indonesia, Thailand, Malaysia, Arunachal Pradesh, Assam, Goa, Gujarat, Himanchal Pradesh.

UNIT III: Development of tourism in Himalaya; Potential and promotion of Tourism- Pilgrimage Combine; Tourism as a process of development in Uttarakhand

UNIT IV : Impact of Tourism on Economy Of Uttarakhand ; Homestay; Community base Tourism in Uttarakhand.


#### **Readings Recommended:**

- 1) Bhardwaj, D.S. Chaudhary, M.: Contemporary issues in Tourism, Himalaya, Mumbai, 1997.
- 2) Bhatt, Rajesh and Kumar, K., Uttarakhand Tourism Geography, Research India Press, New Delhi, 2018.
- 3) Bhatla, A.K.: Tourism Development, Principles and Practices, Sterling, Bangalore, 1989.
- 4) Cris, Ryan: Recreationl Tourism, A Social Science Perspective, Routledge, London, 1991.
- 5) Garg, N.K.: Tourism and Economics Development, Avishkar, Jaipur, 1996.
- 6) Hall, C.M: and Page, S.J.: Tourism in South and South East Asia; Issues and Cases, Butterworth Heinemann, Oxford, 2001.
- 7) Kaul, R.K.: Dynamics of Tourism and Recreation, Inter India, New Delhi, 1985.
- 8) Sinha, p.c.: International encyclopaedia of tourism management, Vols, 1-12, Anmol New Delhi.

#### Course III (g) Economic Geography

UNIT I: Man as resources; Principles of Human Geography; Man and his Environment; concepts of cultural landscape and economic landscape.

UNIT II: Cultural and economic regionalization (Global and Indian context)

  
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UNIT III: Level of economic development; Indicators of economic development; Indian economy and SAPTA, EU, ASEAN, OPEC and WTO, Problems of developed and developing countries.

UNIT IV: Socio- economic issues and policies (Indian Context).

**Readings Recommended:**

- |                          |   |  |
|--------------------------|---|--|
| 1. Brunches              | : | Human Geography, R. and MC Nally Chicago                             |
| 2. Huntington            | : | Human Geography, Asia Publishing House, Bombay.                      |
| 3. Zimmerman             | : | World Resources  |
| 4. Hagett, Peter         | : | Locational Analysis in Human Geography, Edern Arnold, London.        |
| 5. Singh, Jagdish        | : | Arthik Bhoogol Ke Mool Tatva (Hindi) Gyanodaya Prakashan, Gorakhpur. |
| 6. Sample E.C.           | : | Enfluences of Geographic Environment, Henry Holf, New York.          |
| 7. Maurya, S.D. Sing, J. | : | Social Environment of India; Chugh publication, Allahabad.           |
| 8. Salter, C.L.          | : | Cultural Landscape, California                                       |

**Project Report (Elective) any one of the Following**


**The candidate must select theme of the project from the paper given and submit project report not exceed 40 pages on A4 size /thesis size typed page supported with required maps and diagrams.**

Paper IV SOES/GEG/Ph.D/E-008 (a) Geomorphology  
(Contains Geomorphology, Fluvial Geomorphology, Glacial Geomorphology, Geo-Hydrology, Morphometry, Oceanography)

Paper IV SOES/GEG/Ph.D/E-009 (b) Population, Culture and Society,  
(Contains Population studies, Migration, Cultural aspects, Social geography, Gender Geography, Tribal and weaker communities)

Paper IV SOES/GES/Ph.D/E-010 (c) Environmental and Bio- Geography  
(Contains: Environmental Geography Disaster Management; Bio- Geography, Climatology) and Sustainable development

Paper IV SOES/GEG/Ph.D/E-011 (d) Regional Planning and Development,  
(Contains: Regional Planning, Resource Management; Sustainable Development)

  
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