

P. G. Department of Geography

Syllabus: 2021

**M. Phil. in Geography
(Batch: 2021-22)**



**Fakir Mohan University
Nuapadhi, Balasore – 756 089, Odisha**

Syllabus of M. Phil. in Geography
(With effect from the batch 2021 - 2022)

COURSE STRUCTURE

Paper Code	Title	Paper Type	Credit Hours	Marks [Internal + End Term]
FIRST SEMESTER				
GG-501	Research Methodology and Computer Applications	Theory	8	100 [40+60]
GG-502	Recent Trends in Geography	Theory	8	100 [40+60]
RPE	Research and Publication Ethics	Theory and Practical	2	50 [25+25]
GG-503	Computer Applications in Geography	Practical	6	50
SECOND SEMESTER				
GG-601	Review Paper and Proposal Presentation	Project	4	50
GG-602	Pre-M. Phil. Presentation	Project	4	50
GG-603	Dissertation and Viva-Voce	Project	16	200
Total			48	600

MARKING PATTERN:

Paper	Internal Evaluation				End Term Examination			Total
	Home Assignment	Presentation	Quiz	Written (Internal)	Written (End Term) *	Report/ Record/ Synopsis/ Dissertation	Viva-Voce	
GG-501	10	NA	10	20	60	NA	NA	100
GG-502	10	NA	10	20	60	NA	NA	100
RPE	10	05 (GD)	10	NA	25	NA	NA	50
GG-503	NA	NA	NA	NA	40	05	05	50
GG-601	NA	20	NA	NA	NA	20	10	50
GG-602	NA	20	NA	NA	NA	20	10	50
GG-603	NA	30	NA	NA	NA	150	20	200

* Includes experiments in case of practical paper

SCHEME OF INTERNAL EVALUATION (THEORY)

Theory: Each theory paper consists of five units and irrespective of the credit hours assigned, will be of 100 marks, out of which, 40 will be internal marks (continuous evaluation) and 60 will be end term examination marks. There will be three components of internal evaluation – Quiz, Mid Term Written Test and Home Assignment as per the details below. **Project:** Although, the internal component (Presentation) will consist of 30 marks out of 200 in GG-603 and 20 marks out of 50 in GG-601 and GG-602, it won't be reflected as separate entries in the grade sheet, as done in case of the theory papers.

Component	Unit(s)	Marks	Remarks
Quiz – I	I	10	Best of the two quizzes will be considered
Quiz – II	III	10	
Mid Term (Written)	I & II	20	There will be no internal evaluation for the last unit (V)
Home Assignment	IV	10	
Total	I – IV	40	Q – 10 + HA – 10 + W – 20

FIRST SEMESTER

GG-501: RESEARCH METHODOLOGY AND COMPUTER APPLICATIONS

Objectives: To introduce meaningful and professional research- logical and rational explanations, and processes of research writings

Pre-Requisites: Students need to have knowledge on logic of inquiry, take part in dialoguing; and identifying and resolving a problem

Teaching Scheme: Interactive classroom teaching, small field visits, and learning report writing

Course Outcomes:

- i. Students will be able to understand the impact of researcher and subject on each step of the research process
- ii. Students will be able to learn the techniques required for carrying out research
- iii. Students will learn the fundamentals of computer and its application
- iv. Students will be able to learn critical analysis of scholarly literature for effective report writing

Unit I: Introducing Research and Methodology [10 Hours]

Essentials Characteristics and Peculiarity of Geographical Research; Spatial Thinking and Geographic Questions; Research: A way of thinking; Research Methods vs. Methodology; Research Processes.

Unit II: Research Design [10 Hours]

Research Problem; Review of Literature; Research Questions; Research Objectives; Hypothesis Testing; Research Editing; Research Ethics; Plagiarism.

Unit III: Logic of Enquiry [10 Hours]

Quantitative Methods: Sampling Design, Survey, Questionnaire/ Schedule; Qualitative Methods: Ethnography- Participant and Non-participant Observation; Focus Group Discussion; Interview Methods.

Unit IV: Reading and Writing Critically [10 Hours]

Book/ Article Review; Research Writing critically; Writing Everyday Realities; References and Bibliography; Annexure and Appendix; Methods of Communicating Research.

Unit V: Computer Applications [10 Hours]

Components of Personal Computer: Central Processing Unit (CPU), Storage Device, Input Output Device, Other Accessories and Ports; Software: Language, Utility and Application Software; Windows: Basic Operations – File Management, System Maintenance, Protection from virus, worms, malware and spyware; Functions of MS-Office: Basic functions of Word, Excel and Power point.

Suggested Readings:

Amedeo, D. (1971). *An Introduction to Scientific Reasoning in Geography*. John Wiley.

Bunge, W. (1962). *Theoretical Geography*. Lund Studies in Geography. The Royal University of Lund.

Chorley, R.J. and Haggett, P. (1967). *Models in Geography*. Methuen.

Dawson, Catherine. (2002). *Practical Research Methods: A user friendly guide to mastering research*. Howtobooks.

- Dikshit, R.D. (1994). *The Art and Science of Geography*. Prentice Hall India.
- Harvey, D. (1969). *Explanations in Geography*. Edward Arnold.
- Kothari, C.R. (2004). *Research Methodology: Methods and Techniques*. New Age.
- Krishnan, G. and Singh, N. (2017). *Researching Geography*. Routledge.
- Kumar, R. (2011). *Research Methodology: A step-by-step guide for beginners*. Sage.
- Sjoberg, Gideon and Nett, Roger. (2009). *A methodology for social research*. Rawat.
- Summer M, Englewood and Cliffs (1988). *Computers: Concepts and Uses* (2nd ed.). Prentice Hall Inc., New Jersey.
- Hartshorne, R. (1992). *Perspective on the Nature of Geography*. Jodhpur: Scientific Publishers.

GG-502: Recent Trends in Geography

Objectives: To introduce students recent advancements in different areas of geographical analysis

Pre-Requisites: Students need to have knowledge on basic theories and concepts of Geography

Teaching Scheme: Interactive classroom teaching, small field visits, and data analysis

Course Outcomes:

- i. Students will be able to identify key areas of contemporary relevance on which they can further their research work
- ii. Students will understand recent advances in geography and its branches Like Social Geography, Urban Geography, Population Geography, Environmental Geography as well as Remote Sensing and GIS Applications.

Unit I: Exploring Indian Social Structure and Dynamics

[12 Hours]

The Myth of a value free geography; The Call for Social Relevance in Research; Social Structures: Specificities and Organization of Space; Role of Socio-institutional Factors in Social Organization: Access/Ownership of Land and Social Hierarchical Order; Tribal Social Formation: Geographies of *Adivasi* and *Janajatis*; Social Processes in Modern India: Response to Modernization and Social Change; Knowing Gender from India: Equal or Different; Technology of Observation: Detecting Social Change through Satellite Imagery.

Unit II: Urban and Regional Realities

[12 Hours]

Region and Regionalism and regionalization; Regional Inequality and Development; Unruly Cities: Pile et. al.; Pioneers of Urban and Regional Geography: Patrick Geddes and Le Corbusier; Urban and Regional Planning; Community Experience in Urban Planning; and The City: Sassen, Robinson and Harvey; Collaborative and Inclusive Planning.

Unit III: Components of Population Analysis and Associated Issues

[12 Hours]

Emergence of Population Geography as a discipline in Geography; Factors affecting Distribution of Population; Important theories of population: Malthusian Theory of Population; Optimum Population Theory; Theory of Demographic Transition; Components of Population Analysis and their basic measures: Fertility, Mortality and Migration; Challenges associated with Infant Mortality, Ageing and Public Health in India

Unit IV: Geography of Environmental Crisis

[12 Hours]

Global Environmental Problems: Climate Change, Global Warming, Ozone Depletion, Acid Rain, Land Degradation and Desertification; Environmental Hazard, Disaster and associated factors; Hazard Vulnerability in Odisha; Key issues associated with disaster management; Environment-induced displacement and rehabilitation problems; Human Environment and its behavioural classification – Geographical, Operational, Perceptual and Behavioural.

Unit V: Remote Sensing and GIS and its Applications

[12 Hours]

Scope of Remote Sensing and GIS; Historical Development, Advantages and Limitations of Remote Sensing; Basics of Remote Sensing: Energy Sources, Radiation Principles, EM Radiation and EM Spectrum; Interaction of EMR with Atmosphere and Earth Surfaces, Spectral Signatures of Earth Surface Features; Applications of Remote Sensing and GIS in Geography: Water Resource Studies, Agriculture, Forestry and Urban Planning.

Suggested Readings:

Unit-I

- Ahmad, A. (2002). *Social Geography*. Jaipur: Rawat Publication.
- Butola, B.S. (2016). Agrarian Relations in India. In *Economic Geography*, Vol. 1: Land, Water and Agriculture, L.S. Bhat, H.S. Sharma, and M. H. Qureshi. New Delhi: OUP.
- Devika, J. and B. V. Thampi. (2007). Between 'Empowerment' and 'Liberation': The Kudumbashree Initiative in Kerala. *Indian Journal of Gender Studies* 14 (1): 33-60.
- Eyles, John (1979). *An Introduction to Social Geography*, Oxford, OUP.
- Gideon Sjoberg and Roger Nett. (2009). *A methodology for social research*. Jaipur: Rawat Publication.
- Harvey, David. (1978). *Social Justice and the City*, Edward, London.
- Jackson P. and Smith S.J. (1986). *Exploring Social Geography*. George Allen and Unwin.
- Jackson, Richard H. & Loyd E. Hudman. (1990). *Cultural Geography-People, Places and Environment* West.
- Jene Freedman. 2001. *Feminism*. Jaipur: Rawat Publication.
- Johnston R.J. et al. (1981). *Dictionary of Human Geography*. Blackwell, New York.
- Sopher, D.E. (1980). *Exploration of India: Geographical Perspectives on Society and Culture*. London, Longman.
- Srinivas, M.N. (1972). *Social Change in Modern India*. New Delhi: Orient Longman.
- Ursula Sharma. (1999). *Caste*. Jaipur: Rawat Publication.

Unit-II

- Agnew, John A. and Livingstone, David N. (2011). *The Sage handbook of Geographical Knowledge*. Sage.
- Alan Lathan, Derek McCormack, Kim McNamara and Donald McNeill. (2009). *Key concepts in urban geography*. Sage.
- Board, C et.al. (1970). *Progress in Geography*. Vol. 1-8. Edward Arnold.
- Brook, C. (Ed.), Mooney, G. (Ed.), Pile, S. (Ed.). (1999). *Unruly Cities?* Routledge.
- Bunge, W. (1962). *Theoretical Geography*. The Royal University of Lund.
- Cresswell, Tim. (2012) *Geographic Thought: A Critical Introduction*. Wiley Blackwell.
- Dikshit, R. D. (1994): *The Art and Science of Geography*. Prentice Hall India.
- Dikshit, R. D. (2003). *Geographical Thought -A Contextual History of Ideas*. Prentice Hall India.
- Freedman, Jane. (2001). *Feminism*. Rawat.
- Giddens, A. (1979). *Central Problem in Social Theory: Action, Structure and Contradiction in Social Analysis*. McMillan.
- Gottdiener Mark and Leslie Budd. (2005). *Key Concepts in Urban Studies*. Sage.
- Gould, J. R. (1980). *An Introduction to Behavioural Geography*. Oxford.
- Hartshorne, R. (1939). *The Nature of Geography*. AAG Lancaster.
- Hartshorne, R. (1959). *Perspectives on the Nature of Geography*. Rand McNally.
- Harvey, D. (1969). *Explanations in Geography*. Edward Arnold.
- Harvey, D. (1973). *Social justice and the City*. Edward Arnold.
- Harvey, D. (1989). *The Condition of Post Modernity*. Blackwell.
- Holt-Jensen, A. (2001). *Geography: History and Concept*. Paul Chapman.
- Kuhn, T. S. (1962). *The Structure of Scientific Revolution*.
- Lefebvre, H. (1991): *The Production of Space*. Blackwell. (French Edition, 1974)
- Mishra R P. (2002). *Regional Planning: Concepts, Techniques, Policies and Case Studies*. Concept Publishing Company.

- Pacione Michael. (2009). *Urban Geography: A Global Perspective*. Routledge.
- Peet, R. (1998). *Modern Geographical Thought*. Rawat.
- Prasad Sheela. (2016). *Regional Development and Inequalities*. In *Economic Geography (Vol. 2) of Urbanization, Industry and Development*, edited by L.S. Bhat and H. Ramachandaran and R. N. Vyas. Oxford.
- Rabinson, J. (2006). *Ordinary Cities: Between Modernity and Development*. Routledge.
- Randal Crane and Rachel Weber (Eds.). (2012). *The oxford handbook of urban planning*.
- Sassen, S. (1991). *The Global City: New York, London and Tokyo*. Princeton University Press.

Unit-III

- Bhende, A., & Kanitkar, T. (2011). *Principles of Population Studies* (21st ed.). Himalaya Publishing House Pvt. Ltd.
- Clarke, G. I. (1987). *Population Geography* (2nd ed.). Pergamon Press.
- Hassan, M. I. (2020). *Population Geography: A Systematic Exposition*. Routledge India.
- Pathak, K. B., & Ram, F. (2013). *Techniques of Demographic Analysis*. Himalaya Publishing House Pvt. Ltd.
- Srinivasan, K. (1997). *Basic Demographic Techniques and Applications*. Sage Publications.

Unit-IV

- Sharma, P D. (2009). *Ecology and Environment*. Rastogi publication.
- Shaw, R., & Krishnamurthy, R. R. (2009). *Disaster Management: Global Challenges and Local Solutions*. University Press and CRC Press.
- Singh, Savindra. (2015). *Environmental Geography*. Allahabad: Provalika Publications.
- Terminski, B. (2012). *Environmentally-induced displacement. Theoretical frameworks and current challenges*. International Organization for Migration. Geneva.

Unit-V

- Bhatta, B. (2011): *Remote Sensing and GIS*, 2ND edn. Oxford
- Sabins, F.F. (2008): *Remote Sensing: Principles and Interpretation*, Waveland Press Inc., Illinois
- Lillesand, Thomas M. et. al. (2017) *Remote Sensing and Image Interpretation*. Wiley India, New Delhi.
- Weng, Qihao(2010): – *Remote Sensing and GIS Integration: Theories, Methods and Applications*, McGraw Hill.

RPE: RESEARCH AND PUBLICATION ETHICS

Objectives: *To make the student aware of basics of philosophy of science and ethics, research integrity and publication ethics.*

Pre-Requisites: *Students must understand the concept of ethics and its importance while conducting research work.*

Teaching Scheme: *Class room teaching, Group Discussion and Practical Sessions*

Course Outcomes:

- i. *Students will be able to identify research misconduct and predatory publications. Indexing and citation databases, open access publications, research metrics (citations, h-index, impact factor, etc.) and plagiarism tools.*
- ii. *Each scholar will act ethically in each step while carrying out his research work.*

Unit I: Philosophy and Ethics (Theory) [4 Hours]

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

Unit II: Scientific Conduct (Theory) [4 Hours]

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

Unit III: Publication Ethics (Theory) [7 Hours]

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

Unit IV: Open Access Publishing (Practice) [4 Hours]

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

Unit V: Publication Misconduct (Practice) [4 Hours]

A. Group discussions (2 hrs)

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 reference management software like Mendeley, Zotero etc. and anti-plagiarism software like Turnitin, Urkund

Unit VI: Databases and Research Metrics (Practice) [7 Hours]

A. Databases (4 hrs)

1. Indexing databases
2. Citation databases: Web of Science, Scopus etc.

B. Research Metrics (3 hrs)

1. Impact factor of journal as per Journal Citation Report, SNIP, SJR, IPP, CiteScore
2. Metrics: h-index, g-index, i-10 index, altmetrics

Suggested Readings:

- Beall, J. (2012). Predatory publishers are corrupting open access. *Nature*, 489(7415), 179-179. <https://doi.org/10.1038/489179a>
- Bird, A. (2006). *Philosophy of Science*. Routledge.
- Chaddah, P. (2018). *Ethics in Competitive Research: Do not get Scooped; do not get Plagiarized*. ISBN: 978-938748086
- Indian National Science Academy (INSA) (2019). *Ethics in Science Education, Research and Governance*. ISBN: 978-81-939482-1-7. http://www.insaindia.res.in/pdf/Ethics_Book.pdf
- MacIntyre, Alasdair (1967). *A Short History of Ethics*. London.
- 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 Academies Press.
- Resnik, D.B. (2011). What is Ethics in Research & Why is it Important. *National Institute of Environmental Health Sciences*, 1-10. Retrieved from <https://www.niehs.nih.gov/research/resources/bioethics/whatis/index.cfm>

GG-503: Computer Applications in Geography (Practical)

Objectives: *This course is focused on enhancing the ability of students in terms of use of computer and different software for various geographical analyses in the fields of Population, Urban Studies, Health, Regional Planning, Development, Remote Sensing and GIS etc.*

Pre-requisites: *Basic knowledge of computer and MS-Office*

Teaching Scheme: *The classes will be based on hands-on exercises on different dimensions of applied geography with the help of computer programmes like MS-Excel, Arc GIS, Q-GIS, SPSS, PSPP etc.*

Course Outcomes: *At the end of the course, the student is expected to carryout mapping and geo-statistical analyses using available packages and utilize them in different areas of geographical research.*

(A) Microsoft Excel

1. Age-Sex Pyramid
2. Geographic Flow Map
3. Standard Distance (Dispersion of population)
4. Rank Size Rule and Primacy Index
5. Whipple's Index and Myer's Index

(B) SPSS/ PSPP (Open Source)

1. Creation of Data Frame
2. Frequency Distribution, Cross Tabulation and Chi Square
3. Recoding and Construction of Indices
4. Bivariate Correlation
5. Binary Logistic Regression

(C) Arc GIS/ QGIS (Open Source)

1. Georeferencing, Digitizing, Data capturing
2. Adding Style to Data
3. Using Queries
4. Adding Context
5. Making a Map

Suggested Readings:

- Chawla, D., & Sondhi, N. (2015). *Research Methodology: Concepts and Cases*. Vikas Publ. House.
- Dawre, A., & Dawre, R. K. (2019). *Introduction to Remote Sensing, GIS and its Applications*. Walnut Publication.
- Field, A. (2019). *Discovering Statistics using IBM SPSS Statistics*. SAGE Publications India Pvt Ltd.
- Graser, A. (2016). *Learning QGIS: Create great maps and perform geoprocessing tasks with ease* (3rd ed.). Packt Publishing Limited
- Halter, C. P. (2017). *The PSPG Guide: An Introduction to Statistical Analysis* (2nd ed.). Creative Minds.
- Hari Shankar, A., & Bhusan, B. (2016). *Statistics for Social Sciences (With SPSS Applications)* (2nd ed.). PHI Learning Private Limited.
- Law, M., & Collins, A. (2015). *Getting to Know Arc GIS* (4th ed.). Esri Press
- Pathak, K. B., & Ram, F. (2013). *Techniques of Demographic Analysis*. Himalaya Publishing House.
- Sarma, K. V. S. (2010). *Statistics Made Simple: Do it Yourself on PC* (2nd ed.). PHI Learning Pvt. Ltd.
- Siegel, J. S., & Swanson, D. A. (eds.) (2004). *The Methods and Materials of Demography*. Elsevier.
- Srinivasan, K. (1997). *Basic Demographic Techniques and Applications*. Sage Publications.
- Verbyla, D. L. (2010). *Practical GIS Analysis*. Taylor and Francis.

SECOND SEMESTER

GG-601: REVIEW PAPER/ PROPOSAL PRESENTATION

A supervisor will be allotted to each candidate, who shall guide the scholar do the review, prepare a proposal for carrying out the dissertation work and make presentation in the beginning of the semester.

GG-602: PRE-M. PHIL. PRESENTATION

After completion of the research work and before submission of the final thesis, the scholar has to make a pre-M. Phil. presentation and submit a synopsis approved by the concerned supervisor, for evaluation.

GG-603: DISSERTATION AND VIVA-VOCE

As a part of fulfilling the requirement of obtaining M. Phil. degree in Geography, the scholar has to complete a dissertation of 16 credits under the guidance of a supervisor allotted to him/ her. The evaluation will be based on the examination of his dissertation, performance in the presentation and viva-voce.

Finalized and Approved by the Board of Studies of Geography in its 7th meeting held on 22.11.2021