

Banaras Hindu University  
Faculty of Social Sciences  
**Department of Economics**

**PhD (Economics) Course Work**  
(In force from Session 2021-22)

**Revised & Updated Ordinance, Course  
Structure & Curriculum**

**Department of Economics,  
Faculty of Social Sciences,  
Banaras Hindu University, Varanasi**

**Syllabus- PhD Coursework**

**In force from Session 2021-22**

The PhD course for the Research Scholars would consist of five papers. These are as follows-

<b>Paper</b>	<b>Courses</b>	<b>Number of Credits</b>
I	Research Methods in Economics- I	5
I	Research Methods in Economics- II	5
III	Data Bases for Research in Economics	6
IV	Quantitative Techniques and Computer Applications	6
V	Ethics in Research	3
	<b>Total Credits</b>	<b>25</b>

Since PhD course work by default is an applied course so practical, tutorial and one to one interaction with the subject teacher are crucial here. Considering this part of class-load for different papers have been assigned to these. Thus, for Paper-I to IV only 60 Lectures per course have been assigned to class room teaching. Remaining 15 Lectures for a 5-credit course and 30 Lectures for the 6-credit course shall be assigned to tutorials and practical and one to one interaction of the scholars with the subject teacher. Paper-V relates to Ethics in Research. It is a three-credit course and 30 lectures have been kept for teaching and remaining 15 for tutorials/interaction.

**Paper-I**  
**Research Methods in Economics- I**

Nature of Inquiry and Truth: Ontology and Epistemology of Economic Events, Methodological Approaches of Economics: Individualism, Socialism and Existentialism. Alternative Research Philosophies- Positivism, Interpretivism and Critical Theory Analysis, Modernism & Post-modernism. Introduction to Indian System of Logic and Method of Knowing Things. (12 Lectures)

Research & Research Approaches-Approaches to Research: Descriptive vs. Analytical, Applied vs. Fundamental, Quantitative vs. Qualitative, Conceptual vs. Empirical. The Time Consideration: Historical, Experimental and Ex Post Facto, Interdisciplinary, multi-disciplinary and transdisciplinary research-An Introduction (6 Lectures)

Formulation of Research Problem & Writing Research Proposal- Research Problem Formulation- Significance & Steps Involved, Research Questions and their types, Hypothesis- Meaning, Type, Sources, Value Neutrality, Definition of Key terms-constructs and variables. Writing of A Research Proposal. (8 Lectures)

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Research Design: Concept and Importance in Research – Features of a good research design, Types of Research Design- Exploratory, Descriptive, Causal etc. Experimental Research Design- its types, Steps and Procedure of carrying out Experimental Research Design. Mixed Method Research Design and Its different types and their uses. (10 Lectures)

Review of Literature & Citation- Sources & Types of Literature, Traditional, Introduction to Systematic Review of Literature and Meta-Analysis, Introduction to Referencing & Citation Styles, APA Style of citation, Reference Management Software Mendeley, Software for paper formatting like LaTeX/MS Office. (8 Lectures)

Sampling: Concepts of Statistical Population, Sample, Sampling Frame, Sampling Error. Characteristics of a good sample. SRS (WR and WOR), Stratified, Systematic, Cluster and Multistage cluster, Quota Sampling and Sequential Sampling, Sample Weights and Choice of Sampling Design. Determining size of the sample– Practical considerations in sampling and sample size. (6 Lectures)

Collection of Data in Quantitative Research-Types & Sources of Data, Method of Collection of Primary Data- Designing Questionnaire, Properties of a good questionnaire- Reliability, Validity etc. Interview. (6 Lectures)

Research Report Writing: Types of research reports, Structure of the research report- Formulation rules for writing the report: Guidelines for presenting tabular data, Guidelines for visual Representations. (4 Lectures)

### **Suggested Readings:**

1. Creswell W. and J. David Creswell Research Design: Qualitative, Quantitative, and Mixed Methods, Sage Publications
2. Kumar Ranjit Research Methodology: A Step-by-Step Guide for Beginners, Sage Publications, 2016
3. Mark Balnaves & Peter Caputi, Introduction to Quantitative Research Methods, Sage Publications Limited
4. Flick Uwe Introducing Research Methodology: A Beginner's Guide to Doing a Research Project, 2<sup>nd</sup> Edition, Sage Publications Limited
5. Bryman Allen, Social Research Methods, Oxford University Press, 2012
6. Marczyk Geoffrey R. Essentials of Research Design and Methodology, Wiley Eastern
7. Booth Andrew, A Sutton and D Pappaionnau -Systematic Approaches to a Successful Literature Review, Sage Publications
8. Jill K. Jesson with Lydia Matheson and Fiona M. Lacey- Doing Your Literature Review: Traditional and Systematic Techniques, SAGE, Los Angeles, 2011
9. Mukhopadhyay Parimal- Theory and Methods of Survey Sampling, PHI

### **Paper-II**

#### **Research Methods in Economics-II**

This paper would consist of two sections. Section-I would be taught in the class and the performance of the research scholar would be evaluated based on End-Semester Examination. Section-II would be completely applied whereby the research scholar would be directly involved in doing different research activities. Assignments would be

given by the tutor and the performance would be evaluated accordingly. Both the sections would be of 50 marks each.

**Section-I Qualitative Research (50 Marks)- To be tested in Assignment Mode (30 Lectures)**

Qualitative Research Approach- The Philosophy and Features of Qualitative Research, Process of Doing Qualitative Research. (2 Lectures)

Approaches to Qualitative Research- Case Study Method- Types, Process and limitations, Action Research-Purpose, Process, Uses, Ethnographic Research-uses and Process of conducting ethnographic research, Introduction to Content Analysis, Grounded theory, Hermeneutics and Discourse Analysis. (8 Lectures)

Collection of Data in Qualitative Approach- Sampling in Qualitative Approach, Methods of Data Collection- Observation, Focus Group, Interview, Projective technique. (5 Lectures)

Attitude Measurement and Scaling: Types of Measurement Scales; Attitude; Classification of Scales: Single item vs Multiple Item scale, Comparative vs Non-Comparative scales, Measurement Error, Criteria for Good Measurement. (6 Lectures)

Data Processing in Qualitative Research: Data Editing- Field Editing, centralized in house editing; Coding- Coding Closed ended structured Questions, Coding open ended structured Questions; Types of coding (4 Lectures)

Analysis & Report Writing in Qualitative Research. (2 Lectures)  
Introduction to Participatory Rural Research (PRA) & Rapid Rural Research (RRA) (3 Lectures)

**Section-II (50 Marks)- To be tested in Assignment Mode**

The primary objective of this section is to train the research scholar in the basic skill of generating primary data, survey of literature and inculcate in him the nuances of academic writing. It will have three components-

- a. Conducting Field Survey & Handling Primary Data- The scholar would be required to develop and plan and take up a small survey. He will learn the methods and technique of developing questionnaire, questionnaire entry in computers and tabulation and processing of data.
- b. Doing Critical Review of Literature- Based on the training received relating to Review of Literature in Paper-I, the researcher scholar would be required to undertake review of literature given by the tutor and learn the process in practical setting.
- c. Doing Academic Writing- The researcher would be given exposure to academic writing- choice of topics, language, format, referencing etc. and the publication process- choice of journal, review process etc.

The researcher would be given assignment on the three aspects of Section-II and would be evaluated internally by the tutor.

**Suggested Readings:**

1. P Baker and S Ellece Key- Terms in Discourse Analysis, London, Continuum 2010

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2. M Scheier Qualitative Content Analysis, Sage, 2012
3. Creswell; Qualitative Inquiry and research Design: Choosing among Five Traditions, Sage.
4. Flick Uwe; An Introduction to Qualitative Research, Sage.
5. Anselm Strauss and Juliet Corbin; Basics of Qualitative Research: Grounded Theory Procedures and techniques, Sage Publications
6. Denzin, N. & Guba, Y. (1994). Handbook of Qualitative Research. Thousand Oaks: CA: Sage Publications.
7. Silverman, D. (2000). Doing Qualitative Research: A Practical Handbook. Thousand Oaks: CA: Sage Publications.
8. Yin, R.K. (1984), Case Study Research: Design and Methods. Applied Social Research Method Series, Vol. 5, Beverly Hills, CA: Sage Publications.
9. Norman K. Denzin (Editor), Yvonna S. Lincoln (Editor) Handbook of Qualitative Research, Sage Publications Ltd; 2nd Ed (May 2000).
10. Bruce Lawrence Berg, Allyn & Bacon Qualitative Research Methods for the Social Sciences, 4th Ed (11 September, 2000).
11. Sheila Pontis Making Sense of Field Research: A Practical Guide for Information Designers, Routledge (2018)
12. Ellen Perecman & Sara R. Curran A Handbook for Social Science Field Research: Essays & Bibliographic Sources on Research Design and Methods, Sage Publications
13. Stephen Bailey- Academic Writing: A Handbook for International Students, Routledge, 2003
14. Blair J, Czara Ronald and E Blair- Designing Surveys A Guide to Decisions and Procedures, Sage Publishing
15. Fowler, J. F Survey Research Methods 4<sup>th</sup> ed, Sage Publications

**Paper-III**

**Data Bases for Research in Economics**

Introduction to Secondary Data Sources of India: Primary versus Secondary Data – Rationale and Congruence; Architecture of Indian Data System – NSO, Ministries and its allied organizations and DES of States; Independent and International Data Systems or Sources – reliability, comparability and validity; Issue of National versus International Data Sources. (8 Lectures)

Brief Introduction to Important Secondary Data Sources on: National Income, Population, Poverty, Employment, Inequality, Wages, Agriculture, Industry, Health, Education, FDI, Foreign Trade, Environment, Government Finance, Monetary and Banking System. (10 Lectures)

NAS: Structure, Designing, Concepts, Recent debate on Issues in Methodology; limitations

NSSO: Types of surveys – Household, Enterprise and Individuals; Concepts, sampling and definitions in different rounds; Detailed discussion on quinquennial rounds and PLFS; Issue of congruence between NAS and NSS.

Population Census: Structure of different tables; Changes in definition over time; Issues covered over time; Available data till now.

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NFHS: Themes covered; Sampling, Concept, Definitions – changes over time; Limitations.

ASI: Survey design; Concepts used; Limitations

Labour Bureau: Types of surveys; sampling; limitations

DES of Uttar Pradesh: Types of available data; Sources and method of collection of available data; Cautions to be used in using DES data. (20 Lectures)

Data on Environmental Economics- World Bank, Ministry of Statistics & Plan Implementation, and Ministry of Environment, Forest and Climate Change, UN Commodity Statistics Trade Database (UNSTD), Directorate General of Commercial Intelligence & Statistics (DGCIS), International Financial Statistics (IFS), International Trade Centre (ITC), World Economic Outlook (WEO). (10 Lectures)

Extraction of Unit Level Data of different sources such as NSS, NFHS, Population Census. (10 Lecture)

Judgement about Secondary data: Multiple sources – multiple definitions; Justification for use of secondary data; Cautions to be exercised in using secondary data. (2 Lectures)

**Paper-IV**

**Quantitative Techniques and Computer Applications**

Economic Relationships and its verification: One Sample Statistics, Questions of Ontological, Functional, population and Estimable forms. Parametric, Semi and Nonparametric Models. Steps in Formulation of Econometric Models. The Data Question.

Linear Regression Models: Assumptions, Properties and Estimation, Estimating Functions. Goodness of Fit and Testing of Hypothesis. Relaxing the Assumptions; Solutions to the Heteroscedasticity, Autocorrelation and Multicollinearity. Limited Dependent variables.

Multivariate Analysis: The Data Aspect, Multivariate Normal Distribution, Principal Component analysis. Factor and Discriminant Analysis.

Analysis of Time Series Data: Data generating process, Stationarity, Auto Regressive and Moving Average Processes, Auto correlation functions, Unit Root and Structural Break, Cointegration, Error Correction, Volatility. Question of Forecasting.

Analysis of Panel Data: The Data Aspect, Error Component Models, Testing of Hypothesis. Panel Unit Root and Dynamic Panel Model.  
Introduction to Quantile and Spatial Regression Models

**Bayesian Regression and Modelling of Subjective Decisions**

Note: The paper would be taught in workshop mode using statistical software to have a more practical orientation.

**Suggested Readings:**

1. Wooldridge, J. M. (2018). Introductory econometrics: A modern approach, (7th Ed), CENGAGE.
2. Wooldridge, J. M. (2010). Econometric analysis of cross section and panel data. MIT press.

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- Maddala, G. S. (1986). Limited-dependent and qualitative variables in econometrics. Cambridge university press.
- Dougherty, C. (2016). Introduction to Econometrics (5th ed.). New York: Oxford University Press.
- Greene, W. H. (2002). Econometric analysis. Pearson Education India, 5th Edition.
- Christensen, R. (2019). Advanced linear modelling: statistical learning and dependent data. Springer Nature.
- Baltagi, B. (2008). Econometric analysis of panel data. John Wiley & Sons.
- Field, A. (2009). Discovering Statistics using SPSS. London: Sage publications.
- Levine, D. M. (2005). Statistics for Managers Using Microsoft Excel (5th ed.). New York: Prentice
- Gujarati, D. N. (2016). Econometrics by Example (2nd ed.). New Delhi: Palgrave.
- Long, J. S. & Freese, J. (2001). Regression Models for Categorical Dependent Variables using STATA. Texas: Stata Press Publication.
- Longest, K. C. (2014). Using STATA for Qualitative Analysis (2nd ed.). London: Sage Publications.
- Field, A., Miles, J., & Field, Z. (2012). Discovering statistics using R. Sage publications.
- Hao, L., Naiman, D. Q., & Naiman, D. Q. (2007). Quantile regression (No. 149). Sage.
- Ward, M. D., & Gleditsch, K. S. (2018). Spatial regression models (Vol. 155). Sage Publications.

### **Paper-V** **Ethics in Research**

Research Ethics- Definition, Moral philosophy and judgements, Overview of theories and methods in ethics and in research ethics. (5 Lectures)

Scientific Conduct -Ethics with respect to science and research - Intellectual honesty and research integrity - Scientific misconducts: Falsification, Fabrication and Plagiarism (FFP), Cases and procedures for establishing misconduct, preventions and sanctions. Code of Conduct in Experimentation (9 Lectures)

Publication Ethics: definition, introduction and importance - Best practices / standards setting initiatives and guidelines: COPE, WAME, etc. - Conflicts of interest - Publication misconduct: definition, concept, problems that lead to unethical behaviour and vice versa, types of publication misconduct - Violation of publication ethics, authorship and contributor ship. Redundant Publications: duplicate and overlapping publications, salami slicing - Selective reporting and misrepresentation of data. Identification of publication misconduct, complaints and appeals - Predatory publisher and journals. (12 Lectures)

Plagiarism, Software for detection of Plagiarism. (4 Lectures)

### **Suggested Readings**

- Todorovich Miro; Paul Kurtz and Sidney Hook- The Ethics of Teaching and Scientific Research
- Stanley Barbara H.; Joan E. Sieber and Gary B. Melton Research Ethics: A Psychological Approach
- Steneck Nicholas H. Introduction to the Responsible Conduct of Research. Office of Research Integrity. 2007. Available at: <https://ori.hhs.gov/sites/default/files/rcrintro.pdf>

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4. Oliver Paul The Student's Guide to Research Ethics Open University Press, 2003
5. Shamoo, Adil E. and David B. Resnik Responsible Conduct of Research, Oxford University Press, 2003
6. Muralidhar Kambadur, Amit Ghosh Ashok Kumar Singhvi(eds) Ethics in Science Education, Research and Governance. Indian National Science Academy, 2019. ISBN : 978-81-939482-1-7.
7. Anderson B.H., Dursaton, and Poole M.: Thesis and Assignment Writing, Wiley Eastern 1997.
8. Bijorn Gustavii: How to write and illustrate scientific papers? Cambridge University Press.
9. Bordens K.S. and Abbott, B.b.: Research Design and Methods, Mc Graw Hill, 2008.
10. Graziano, A., M., and Raulin, M., L.: Research Methods – A Process of Inquiry, Sixth Edition, Pearson, 2007.