

**Department of Economics**  
**School of Social Sciences**  
**Guru Ghasidas Vishwavidyalaya, Bilaspur, Chhattisgarh**

**Proposed Syllabus for Pre Ph.D. Coursework: 2022-23**

Paper Code	Types of Papers	Credit	Classes	Max. Marks	Min. Passing Marks
ECO: Ph D 101	Research Methodology	4	60	100	50
ECO: Ph D 102	Research Ethics and Practices	4	60	100	50
ECO: Ph D 103	Current Economic Issues	4	60	100	50
	Seminar (Only Qualifying)			100	Only Qualifying

Note: The Seminar presentation is compulsory to be passed but the marks will not be added to the overall evolution marking.

**Programme Outcomes:** The learners will

PO-1	Knowledge	Gain knowledge of research methodology, ethics and practices, applied econometrics, and some basic economic issues for research.
PO-2	Problem analysis	Identify, structure frameworks, generate data and analyze them to understand economic problems and develop approaches to solve real time economic problems.
PO-3	Design	Design sampling framework and devise methodology to analyze for different economic issues.
PO-4	Investigation	Investigate complex economic problems by knowing do's and don'ts of research and analysis.
PO-5	Tools	Use mathematical and statistical tools and develop econometric models to investigate economic problems.
PO-6	Society	Apply the knowledge to assess various issues viz. policy matters, socio-economic, environmental, macro, financial issues of the government and suggest remedial measures for the welfare of the society and humanity.
PO-7	Environment	Understand the importance of the environment for sustainable economic development.
PO-8	Ethics	Apply ethical principles and commit to professional ethics, and responsibilities and norms of the applied research in economics.
PO-9	Teamwork	Function effectively as an individual and as a member or leader in diverse teams and multidisciplinary settings.
PO-10	Communication	Communicate effectively by presentations and writing reports.
PO-11	Management	Manage projects in multidisciplinary environments as member or a team leader.
PO-12	Life-long learning	Engage in independent lifelong learning in the broadest context of social change.



**Programme Specific Outcomes:**

<b>PSO-1</b>	<i>Identify, formulate and apply concepts acquired through pre-Ph.D. Courses in Economics and apply the understanding to the real-world applications.</i>
<b>PSO-2</b>	<i>Design and develop models and analyze data by using cutting-edge software.</i>
<b>PSO-3</b>	<i>Ability to adapt and comprehend the methodological advancement in research and contemporary economic analyses with demonstration of leadership qualities for the betterment of organization, environment and society.</i>

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## Research Methodology (ECO: Ph. D.-101)

### Course Objectives:

The Course covers basics of research processes starting from formulating a research problem to report writing. It will also orient and review some useful econometric skills required for economic research and analyses.

### Course Outcomes:

#### CO1. Knowledge

- By studying this paper students are expected to learn the concepts and fundamentals of research like identifying a research problem, reviewing literature, developing hypotheses, selecting variables, developing econometric models, collecting, analyzing and interpreting data, and writing a research report.
- Students will gain applied knowledge of statistical tools, econometric models, problem diagnoses and remedies.
- They will also gain the theoretical aspects of handling software packages for data analysis essential for research in economics.
- They will understand various possible issues at different stages of research.
- They will also be knowing different tools for testing hypotheses and the decision rules about the statistical significance of individual explanatory variables and also the overall model.

#### CO2. Skill

- Meta-analysis in reviewing literature.
- Learn how to cite an article, book, manuscript, etc.
- Framing hypotheses and structuring a sampling design.
- Framing questionnaire and doing pilot study.
- Preparing research proposal.
- Skill for data processing and analysis by using different software.
- Comparing the theoretical validity with empirical findings.
- Decision about the reliability and robustness of estimation

#### CO3. Application

- Students to apply their learning and competencies to think and act like a researcher and carry out independent research in future.
- They can apply all the theoretical knowledge and practical skills in shaping their research and analysis.

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## **Module I: Foundations of Research.**

Meaning of Research, Objectives of Research, Significance of Research, Research Approaches- Descriptive vs. Analytical, Applied vs. Fundamental, Quantitative vs. Qualitative, Conceptual vs. Empirical, Research Design- 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, Sampling designs: Concept of population and sample, census vs. sampling, sampling frame, Parameter and Statistic, Different types of sampling design. (12 classes)

## **Module II: Research Processes**

Research Problem Formulation- Significance & Steps Involved, Research Questions and their types, Hypothesis- Meaning, Type, Sources, Value Neutrality, Writing of A Research Proposal. Review of Literature & Citation- Sources & Types of Literature, 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.

Data Collection and Organization: Sampling, Questionnaire design, entering data using CS Pro, Qualitative methods: Ethnography, Unstructured Interviews, Participant observation, Focus groups. Secondary sources of information: Introduction and working with data set viz. NSSO, Census, DLHS, NFHS, IHDS, World Bank, IMF, RBI, BSE, NSE data, PROWESS, etc. (12 classes)

## **Module III: Hypothesis Testing**

Point and Interval Estimation, Framing the null and alternative hypothesis, p-values, Type-I and Type-II errors, level of significance, power of a test, standard error, applications of z, t, F and chi-square tests, simple regression- concept of  $R^2$  and Adjusted  $R^2$ , ANOVA. (12 classes)

## **Module IV: Data Analysis**

Review of Multiple regression analysis, Model Evaluation and Diagnostic Tests, Impact evaluation (Regression based, Score Matching). Uses of Regression with Dummy Variables, Panel data analysis- Pooled OLS, FE/RE regressions and Diagnostic Tests, DPD methods. (12 classes)

## **Module V: Using Software and Thesis Writing**

R: Basics of R, Data management, Graphics, Statistical and econometric analysis, STATA: Data management and analysis, SPSS: Data management and analysis, EVIEWS: Data management and analysis. (Any two software)

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, Documentation, foot notes, end notes and bibliography. (12 classes)

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## Basic Reading List

1. Kothari R.C. Research Methodology, Methods and techniques, New Age International Publishers.
2. Don E. Ehridge Research Methodology in Applied Economics: Organizing, Planning and Conducting Economics Research, John Wiley and sons, April 2004
3. C.T. Kurion - A Guide to Research in Economics
4. An Introduction to Applied Econometrics- a time series approach: Kerry Patterson, Palgrave Houndmills, Basingstoke, Hampshire and New York.
5. Gujarati D. N. (1995), Basic Econometrics (2nd Edition) McGraw Hill, New Delhi.
6. Jack Johnston and John Dinardo, Econometric Methods, McGraw-Hill International Editions, Singapore, 1997
7. Jeffrey M. Wooldridge, Econometrics, CENGAGE learning, India Edition, 2009
8. Dimitrios Asteriou and Stephen Hall, Applied Econometrics: A Modern Approach, Palgrave Macmillan, 2007.
9. Damodar Gujarati, Econometrics by Example, Palgrave Macmillan, 2011.

Cos	Programme Outcomes (POs)												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO
CO1	3	3	3	3	3	2	1	1	2	3	3	2	3	3	2
CO2	3	3	3	3	3	2	1	1	2	2	2	2	3	3	3
CO3	3	3	3	3	3	3	1	1	2	3	3	3	3	3	3

Weightage: 1-Sightly; 2-Moderately; 3-Strongly

## Research Ethics & Practices (ECO: Ph.D.- 102)

### Course Objectives:

The Course covers concepts and fundamental ethical requirements in different stages of research and possible consequences of their violation. In addition, it empowers the researcher to understand different tools and techniques to identify journals and publications where to publish.

### Course Outcomes:

#### CO1. Knowledge

- Gain knowledge regarding the philosophical background of research.
- Know the level of honesty and integrity required for a researcher at different stages of research, especially gain knowledge regarding issues related to copyrights violation, plagiarism, repetitive research.
- Learn the consequences of violation of research ethics.
- Know the Do's and don'ts at every step of research and publication.

#### CO2. Skill

- Use of plagiarism software.
- Identify Open access journals for publications.
- Skill for measuring research metrics.

#### CO3. Application

The learners will apply publication ethics in every step of research.

### Module I: Philosophy and Ethics

Introduction to Philosophy- definition, nature and scope, concept, branches, Ethics- definition, moral philosophy, nature of moral judgment and reactions. (12 Classes)

### Module II: Research Ethics

Ethics in relation to science and research, intellectual honesty and research integrity, scientific misconduct-falsification, fabrication and plagiarism (FFP); redundant publications-duplicate and overlapping publications, and salami slicing; selective reporting and misrepresentation of data.

(12 Classes)

### Module III: Publication Ethics

Publication ethics- definition, introduction and importance; Best practices/standard setting initiatives and guidelines-COPE, WAME, etc.; conflicts of interest; Publication misconduct- definition, concept, problems and types; Violation of publication ethics, authorship and contributorship. (12 classes)

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## Module IV: Research Practice

Open access publishing- open access publications and initiatives, online resources to check publisher copyright & self-archiving policies, software tool to identify predatory publications, journal finder/journal suggestion tools, use of plagiarism software. (12 classes)

## Module V: Databases and Research Metrics

Databases- Indexing databases, citation databases-Web of science, Scopus, etc.; Research metrics-impact factor of journal, metrics- h index, g index, i10 index, altimetric. (12 classes)

### Basic Reading List

1. Bird, A. (2006), Philosophy of Science, Routledge.
2. MacIntyre, A Lasdair (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 Academies Press.
5. Resnik, D. B. (2011) What is ethics in research & why is it important, National Institute of Environmental health Sciences.
6. Beall, J. (2012) Predatory publishers are corrupting open access.

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CO1	3	2	2	2	2	3	1	2	3	3	3	2	2	2	2
CO2	2	2	2	2	2	2	1	3	2	2	2	2	3	2	2
CO3	2	2	3	3	3	3	1	3	3	3	3	3	2	2	2

Weightage: 1-Slightly; 2-Moderately; 3-Strongly

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## Current Economic Issues (ECO: Ph.D.- 103)

### Course Objectives:

This course aims at orienting researchers on different contemporary issues in Indian Economy so that they can think, choose and conceptualize their areas of research and its multidisciplinary.

### Course Outcomes:

#### CO1. Knowledge

- It will familiarize students with different terminologies, concepts and issues in Indian economy.
- It will enable research scholars to understand various issues concerning Indian demography and their developmental challenges, issues in Indian agriculture, industry, public finances, social and economic infrastructure, international trade, economic reforms and policy interventions on these fronts.

#### CO2. Skill

- Understanding issues in Indian Economy will facilitate research skill to identify variables and frame hypotheses.

#### CO3. Application

- It will also help in conceptualize research topics, selecting variables, formulating hypotheses, analyzing and interpreting the results.

### Module I: Demography and Developmental Challenges

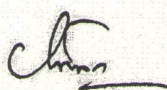
Demographic transition; population policies, human development and man-power planning, migration and urbanization issues, major issues related to poverty, inequality and unemployment; critical appraisal of government measures with special references to rural development, trade of between development & environment. (12 Classes)

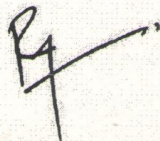
### Module II: Issues in Infrastructure

Developmental challenges in physical infrastructural; energy, transport and communication; challenges in social infrastructure- education and health, financing infrastructure development and policies issues, issues in rural infrastructure. (12 Classes)

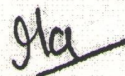
### Module III: Sectoral Growth and Policies

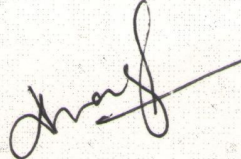
Input use and growth in Indian agriculture, food security, food procurement and distribution, farm indebtedness, subsidies, agricultural marketing and price policy; second generation green revaluation, climate change and policy for sustainable agriculture, diversification of agriculture.













Trend and Composition of Industrial growth, privatization and disinvestment debate, issues related to sick units and government policies, performance of MSME sectors, Land acquisition, SEZ, Issues in labor market reform. (12 Classes)

#### Module IV: Issues in Fiscal & Financial Sectors

Fiscal sector reforms in India- tax and expenditure reforms, issues concerning GST, fiscal consolidation and debt management, Fiscal federalism- vertical and horizontal Imbalances. Reforms in the Banking Sector, Reforms in the Debt Market. (12 Classes)

#### Module V: Issues in International Trade

Composition and Direction of Foreign trade; Exim Policies and Trade Liberalization, WTO and Agriculture, Issues concerning FDI in India, Regional cooperation (OPEC, ASEAN, G20, BRICS). (12 Classes)

#### Basic Reading List

1. Datt, R. and K.P.M. Sundharam (latest), Indian Economy, S. Chand & Company Ltd., New Delhi.
2. Dhingra, I. C. (latest edition), The Indian Economy: Environment and Policy, Sultan Chand & Sons, New Delhi.
3. Misra, S.K. and V.K. Puri (latest edition), Indian Economy — Its Development Experience, Himalaya Publishing House, Mumbai.
4. Government of India, Economic Survey (Annual), Economic Division, Ministry of Finance, New Delhi.
5. Ahluwalia, I.J. and I.M.D. Little (Eds.) (1999), India's Economic Reforms and Development (Essays in Honour of Manmohan Singh), Oxford University Press, New Delhi.
6. Datt, R. (Ed.) (2001), Second Generation Economic Reforms in India, Deep & Deep Publications, New Delhi.

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O1	3	3	2	2	1	2	2	1	2	3	2	3	2	1	2
O2	2	2	2	2	2	2	1	1	2	2	2	1	2	2	2
O3	2	2	1	2	1	3	2	2	2	3	2	3	2	2	2

Weightage: 1-Sightly; 2-Moderately; 3-Strongly

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