

INDIRA GANDHI UNIVERSITY MEERPUR- REWARI
(Established under State Legislature Act 29 of 2013)



DEPARTMENT OF ECONOMICS

**Syllabi and Scheme of Examination for Ph.D. Coursework (Economics)
under Credit System w.e.f. the Academic Session 2020-21**

INTRODUCTION

The Ph.D course work is a full time regular programme. The entire Ph.D course work syllabus is spread over in one semesters consisting of 16 credits in which all are core courses. The evaluation pattern both for internal as well as external examinations is as per University Regulations.

Instructions for the paper-setter and candidates:

The curriculum of the programme has been divided into four units. There shall be 8 questions in all. Each unit shall have two questions and the candidates shall be required to attempt one question from each Unit. Each question shall carry 20 marks ($20 \times 4 = 80$).

In case of theory paper of Computer Applications for Research in Economics, there shall be nine questions in all. Question no. 1 shall be compulsory, consisting of five short answer type questions covering the entire syllabus. Two questions will be asked from each unit. Student will have to attempt one question from each unit. Each question shall carry equal marks.

Note:

- In each course there shall be 20 marks for internal assessment to be awarded on the basis of their performance in two assignments and one seminar.
- The syllabus and scheme of examination for the course Research and Publications Ethics will be followed and implemented in accordance with the instructions at University level.

**Programme Structure and Scheme of Examination
Ph.D. Course Work in Economics w.e.f. 2020-21**

Nomenclature of the Course	Course Code	Credit	Marks (Theory+ Internal Assessment)
Research Methodology in Economics	ECP-101	4	100 (80+20)
Econometrics	ECP-102	4	100 (80+20)
Computer Applications for Research in Economics	ECP-103	4	100 (50+50) (Theory Practical)
Research and Publications Ethics	ECP-104	2	50 (As per University Guidelines)
Review of Literature and Seminar	ECP-105	2	50 (30+20)
Total Credits in Ph.D Coursework		16	

**Ph.D. COURSE WORK (ECONOMICS)
RESEARCH METHODOLOGY IN ECONOMICS
COURSE ECP-101**

**Maximum Marks: 100
Time: 3 Hrs.**

**Theory Marks: 80
Internal Assessment Marks: 20**

Note: The question paper shall have four units. Each unit will contain two questions and the students shall be asked to attempt one question from each unit.

Course Objectives

1. *To introduces the nature and basic theoretical system of methodology of Economics*
2. *The objective of this course is to enhance the knowledge of the students with the methodological aspects of conducting a research especially in the field of Economics.*
3. *To apprise the students with the advances in the field of Research Methodology*
4. *To develop research methodological skills for undertaking research in social sciences in general and in a discipline in particular.*
5. *To understand the various secondary sources of economic research*
6. *To teach doctoral students to explore and study in the economic research area and to prepare to write Ph.D thesis.*

Unit-I

Fundamentals of research methodology – Meaning of research – The relation between theory and research – Scientific and social research – Pure and applied research – Nature, special features and different approaches of social science research; Theoretical system of Economics and its Methodology. Evolution of Economics in terms of Paradigm Shift and MSRP (Methodology of Scientific Research Programme)

Unit-II

Formulation of research problem – Formulation of null and alternative hypothesis – Research design and methods; review of literature- The purpose of review of literature. Literature search procedure, Sources of review literature, Planning and review work, Note taking

Unit-III

Data collection: methods of data collection; Sampling methods – Random, stratified, multistage, systematic, cluster, quota and judgment samples; Secondary data – Nature and Sources of Micro and Macro statistical data relating to: Agriculture, Industry, Public Finance, Banking & Finance, External Trade, Consumption, Employment, and National Income.

Unit-IV

Measurement Scales: Nominal, Ordinal, Interval and Ratio, Graphical and Tabular Presentation of Data, Presentation of Tables, Use of Appropriate Graphs, Transcribing/compiling Data, Coding, editing, cleaning of Data, Analyzing and Interpreting Data; Drawing conclusions and reporting -Structure of the dissertation and thesis - Methods of footnotes and referencing, presentation of report

Learning outcomes:

On completion of this course, the PhD students will be able to:

- 1. Understand some basic concepts of research and its methodologies.*
- 2. Students be able to identify a research problem stated in a study.*
- 3. It enables the students to distinguish a purpose statement, a research question or hypothesis, and research objectives.*
- 4. It will help the students to identify the overall process of designing a research study from its inception to its report.*
- 5. Students will be able to learn how to conduct independent research in economics.*

SUGGESTED READINGS

- Malhotra, Naresh K.: Marketing Research an Applied Orientation, 5th edition, Pearson.
- Cooper and Schindler: Business Research Methods, 8th edition, Tata McGraw Hill.
- Boyd & Westfall: Marketing Research, Prentice Hall.
- Kothari, C. R.: Research Methodology, New Age International Publishers.
- Shekharan & Uma: Business Research Methods-A Skill- Building Approach, 7th ed., New York, John Willy, 2002.
- Creswell, John W.: Research Design-Qualitative & Quantitative Methods, New York, John Willy, 2002

**Ph.D. COURSE WORK (ECONOMICS)
ECONOMETRICS
COURSE ECP-102**

**Maximum Marks: 100
Time: 3 Hrs.**

**Theory Marks: 80
Internal Assessment Marks: 20**

Objectives of the Course:

- 1. To provide and improve the knowledge among the PhD students with the methodological as well as empirically aspects of econometrics*
- 2. To help the PhD students to develop a way of thinking of economic relationship in quantitative terms*
- 3. To understand the econometric relationships for meaningful research in economics.*
- 4. To equip the students with basic theory of econometrics and relevant applications of the methods.*
- 5. To enable the students to use econometrics tools and methods in the research*

Note: The question paper shall have four units. Each unit will contain two questions and the students shall be asked to attempt one question from each unit.

Unit- I

Meaning, Nature and Scope of Econometrics; Methodology of econometrics -model specification stage, model estimation stage, model evaluation stage: Properties of an econometrics model; Simple linear regression model – Estimation by using OLS method – assumptions of OLS - Mean and variance of least square estimates; Properties of least square estimates: Gauss Markov Theorem; Coefficient of Determination and Goodness of fit through R square

Unit-II

Econometric problems; Multicollinearity – reasons, consequences, methods of Detection and important Remedial measures. Heteroscedasticity – reasons, consequences, methods of detection (Rank Correlation test, Goldfeld and Quandt test, Glejer test) and important remedial measures. Autocorrelation – reasons, consequences, methods of detection (Run test, Durbin-Watson d statistic) and important remedial measures.

Unit-III

Qualitative variables as explanatory variables: Concept of dummy variables, estimating the shift in intercept and slope coefficient, interpretation of dummy coefficient, estimating seasonal effects, Logit and Probit models; Elementary idea of functional forms of the Model: Log-Lin, Lin-Log, Log-Log Model.

Unit-IV

Basic concepts of Time series; stationary and non-stationary process; Test of Stationarity- Graphical Analysis, and Unit root tests (Dickey-Fuller (DF) test, Augmented Dickey-Fuller (ADF) test; Forecasting with ARIMA and VAR Models-Box Jenkins Methodology; Co-integration, Causality analysis (Granger and Sim); Vector Auto-regression (VAR) and Vector Error Correction Models (VECM).

Learning Outcome:

On completion of this course, the PhD students will be able to:

- 1. Enhance their understanding and knowledge of econometrics and its applications*
- 2. Students should be able to use econometrics to estimate an econometric model*
- 3. Use various econometric tools and techniques in research.*
- 4. Will enhance their capacity to use, study and interpret regression results in their research work*
- 5. Based on the econometric analysis, they will be in a better position to give more robust policy alternatives*

SELECTED READINGS

- Damodhar N. Gujarati, Basic Econometrics, Tata McGraw Hill, 2013
- A Koutsoyamis, Theory of Econometrics, Palgrave 2004.
- Dilip.M.Nachane, Econometrics: Theoretical Foundations and empirical Perspective, Oxford University Press; 2006
- Greene.W.H, Econometrics Analysis, Prentice Hall, 1997
- Johnston.J, Econometric Methods, McGraw Hill, 1991.

Ph.D. COURSE WORK (ECONOMICS)
COMPUTER APPLICATIONS FOR RESEARCH IN ECONOMICS
COURSE ECP-103

Maximum Marks: 100
Time: 3 Hrs.

Theory Marks: 50
Practical Marks: 50

Note: The question paper shall have four units. Each unit will contain two questions and the students shall be asked to attempt one question from each unit.

Objectives of the Course:

- 1. To provide acquaintance on computing skills to be used in research framework.*
- 2. To understand the applications of computer economic analysis*
- 3. To create a reasonable understanding of economic relationships and relevant computer software*
- 4. To develop understanding on tools and techniques for the analysis of research data and to utilize the same with the help of appropriate computer programmes and software.*
- 5. To develop and implement various econometric models in statistical/econometrics packages*

Unit-I

Role of computer in economic research; Application of MS word and MS Excel in presentation of data and report writing. Ways of effective power point presentation; Style of Referencing: APA Style, Harvard and MLA Style. Application of MS Word in referencing, Online Citation using Mendeley Desktop.

Unit-II

Introduction to SPSS; Getting familiar with the interface; Importing data from Excel; Creating a new data file (entering survey data); Data View and Variable View, Text Output Editor, Toolbar, Menus, Dialogue Boxes, Opening and Saving Files; Preparation of Data Files: Defining Variables – Variables Labels, Value Labels, Missing Values, Variable Types, Column Format, Measurement Level; Data Entry, Inserting and Deleting Cases and Variables.

Unit-III

SPSS- Data Screening and Transformation: Errors in data entry; Accessing Normality & Homogeneity of variance; Data transformation – recode, compute, data selection; Data Analysis: Descriptive statistics – Frequency Distribution, measurement of central tendency. Correlation & Regression; One Sample t-test, Repeated measures t-test and independent groups t-test; One-way and Two-way ANOVA with post-hoc comparisons; Chi-square test.

Unit-IV

Introduction to Application of E-Views Software in Regression analysis, AR, MA, ARMA and ARIMA Modelling; Assessing Stationarity, Multicollinearity & Heteroskedasticity, Application of E-Views in Granger Causality Test, VAR Model & VECM, Fixed Effect and Random Effect Model.

Learning outcomes:

On completion of this course, the PhD students will be able to:

- 1. The students will be able to gain the theoretical understanding of the computer and its applications*
- 2. On the application side, students will be able to utilize tools and techniques for analysis, presentation, and interpretation of research data.*
- 3. After this course, the students will get the software knowledge by which they will be able to research work conveniently and efficiently.*

Suggested Readings:

- Andy Field. *Discovering Statistics Using SPSS*. Sage Publications
- Sheridan J Coakes; Lyndall Steed and Peta Dzidic. *SPSS for Windows – Analysis without Anguish*. Wiley India.
- Darren George and Paul Mallery, *SPSS for Windows Step by Step: A Simple Guide*. Pearson
- Donald Cooper, Pamela Schindler. *SPSS Windows Student Version for use with Business Research Methods*. Tata McGraw Hill.
- Julie Pallant. *SPSS Survival Manual*. Tata Mc Graw Hill
- Kiran Pandya, Smruti Bulsari, Sanjay Sinha. *SPSS IN SIMPLE STEPS*. Wiley India.
- Uma Sekaran and Roger Bougie. *Research Methods for Business*. Wiley India.

**Ph.D. COURSE WORK (ECONOMICS)
RESEARCH AND PUBLICATION ETHICS
PAPER ECP-104**

As per University guidelines

**Ph.D. COURSE WORK (ECONOMICS)
REVIEW OF LITERATURE AND SEMINAR
PAPER ECP- 105**

Note: The research scholars will be provided research papers/ articles for comprehensive review as per the wider interest of the candidates and the same will be evaluated by the concerned teachers. Apart from that seminar on some of the reviews will be undertaken by the department. Candidates have to pass separately in each of the section i.e. Review of literature and seminar. The following factors will be taken into consideration while evaluating the candidate and the distribution of marks will be as follows:

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|-------------------------|----------|
| 1. Review of Literature | 30 Marks |
| 2. Presentation | 20 Marks |

Students shall review 15 to 20 research papers in the field of their interest. The evaluation shall be done as under:

- (i) 50% at internal & Department level by the Chairperson concerned and a Committee of two/three faculty members constituted by the Chairperson by rotation on the basis of seniority
- (ii) 50% by External Expert appointed by the Vice-Chancellor on the recommendations of the Departmental Committee out of panel of 10 External Experts.

