Vidyasagar University

Faculty of Arts

Department of Economics

Syllabus

Ph.D. Course Work (Economics)

2016

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The Course Structure and Division of Marks: Ph.D. Course Work (Economics) 2016

Course/ Paper	Paper Name	F.M.
Eco-111	Research Methodology in Economics with Computer Applications	50 (Written -40, IA-10)
Eco -112	Econometric Methods	50 (Written -40, IA-10)
Eco-113	Applied Econometrics	50 (Written -40, IA-10)
Eco-114	Literature Review	50

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Programme Outcome

Completing Ph.D. Course Work in economics from the Department of Economics, Vidyasagar University, the students are expected to have comprehensive knowledge of modern theories of economics as an academic discipline. They are also expected to be able to analyse economic problems of different countries or regions, to acquire skill for data analysis and data interpretation using statistical methods, to evaluate economic and public policies using appropriate models and also to exchange economic ideas. The programme will help students to pursue research work in the subject or related disciplines. The programme is also expected to improve analytical and argumentative skills of the students that are crucial for winning job in the present day job market.

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Paper Eco-111
Research Methodology in Economics with Computer Applications

(F.M. 50, Written – 40, IA - 10)

Course Outcomes:

This course offers an overview of research methodology including basic concepts employed in quantitative and qualitative research methods. It also Includes computer applications for research. Upon completing this course, each student will be able to: 1. demonstrate knowledge of research processes (reading, evaluating, and developing); 2. perform literature reviews using print and online databases; 3. employ American Psychological Association (APA) formats for citations of print and electronic materials; 4. identify, explain, compare, and prepare the key elements of a research proposal/report; 5. define and develop a possible research interest area using specific research designs; 6. compare and contrast quantitative and qualitative research.

Group – A (Marks: 25, Written -20, IA-5)

1. **Introduction**

- Research meaning and significance
- Characteristics of scientific Research
- Type of research : pure, applied, analytical, exploratory,
- Research process
- An overview of research methodologies in Economics

2. **Data : Types, Sources and Sampling methods**

- Data types Qualitative and Quantitative; Cross and Time series
- Sources of data: Primary and secondary (Use of Government Reports),
- Designing of Questionnaire, PRA
- Sampling Methods with applications in the Indian context

3. **Analysis of data**

- Descriptive Statistics with software applications
- Analysis of Variance (ANOVA): Concepts and Applications using computer software

Group B (Marks: 25, Written -20, IA-5)

1. **Hypothesis Testing**

- Hypothesis testing – parametric and non-parametric
- Data based applications of Hypothesis Testing

2. **Report Writing**

- Meaning and significance of a Research Report
- Types of Research Report
- Format of a Research Report : Title to Bibliography
- Principles of writing the Research Report : Organization and Style

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- Writing the report on the survey conducted

3. Computer Applications

- Excel, SPSS, Eviews and Stata
- Internet Applications:

References:

1. Wilkinson and Bhandarkar, *Methodology and Techniques of Social Research*, Himalaya Publishing House.
2. Kothari R.C., *Research Methodology, Methods and Techniques*, New Age International Publishers, IInd revised edition, reprint 2008.
3. Cooper D. and Schindler P. *Business Research Methods*, Tata McGraw Hill. Sultan Chand & Sons.
4. Don E. Ehridge, *Rresearch Methodology in Applied Economics* : Organizing Planning and Conducting Economics Research, John Wiley and sons, April 2004.
5. **Deepak Chawla AndNeenaSondhi,** Research Methodology Concepts And Cases, Vikas Publishing House Pvt. Ltd.-Noida, 2011.
6. Goon, A.M., Gupta, M.K. and Dasgupta, B.(2005): Fundamentals of Statistics, The World Press Private Limited.
7. Mathai, A. M. and Rathie, P.N.(1977):Probability and Statistics, Macmillan.

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Paper - Eco-112
Econometric Methods

(F.M. 50, Written – 40, IA - 10)

Course Outcomes:

At the end of course student will be able to: learn the basics of time series data and panel data, understand the stationary time series models and advantages of panel data, perform forecasting with time series data, fixed effects, random effects model, LSDV model and dynamic panel also, apply time series techniques to state ARCH and multivariate time series, conduct research on panel data after knowing panel data handling, and opportunities for employability in marketing, finance and other business houses, Principal Component Analysis, and Simultaneous Equation Methods. Students will be able to learn when and how to apply the above econometric methodologies to analyse economic problems.

Group – A (Marks: 25, Written -20, IA-5)

Multiple Regression Analysis

Motivation for multiple regression; Estimation and interpretation of OLS; Sampling distributions of the OLS estimators; Testing Hypothesis; Functional form; Goodness of fit.

Time Series Analysis

Univariate time series; AR, MA, ARMA; Stationarity; Unit roots; Integrated Series; Cointegration and Error Correction; VAR; Granger causality; Impulse response functions; Structural Breaks

(JD, Chapter 7-8.)

Growth and Volatility

Different Approaches, Structural Break analysis**,** Modelling Volatility: ARCH Models and its extension.

Group – B (Marks: 25, Written -20, IA-5)

Panel Data Methods

Why panel data is necessary. Problems with panel data: attrition. Pooled OLS, random effects and fixed effects estimators.

(WOO, Chapters 13-14.)

Discrete and Limited Dependent Variable Models

Discrete choices; Linear probability model; Probits, Logits, Tobits

(WOO, Chapter 17.)

Factor Analysis and Data Reduction

Principal Component Analysis

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References

1. Baltagi Panel Data Analysis

2. Wooldrige J. M. Econometric Analysis of Cross Section and Panel Data. The MIT Press, 2002.

3. Cameron, C.A. and Trivedi, P.K. Microeconometrics: methods and applications. Cambridge U.P., 2005. (CT)

4. Cameron, C.A. and Trivedi, P.K. Microeconometrics Using STATA. STATA Press, 2009.

5. Ruud P.A. An Introduction to Classical Econometric Theory.Oxford U.P., 2000.

6. Greene, W.H. Econometric Analysis. 6th Ed. Prentice-Hall, 2008.

7. Morgan, S.L. and Winship, C. Counterfactuals and Causal Inference: Methods and Principles for Social Research. Cambridge U.P., 2007.

8. Kennedy, P. A Guide to Econometrics.The MIT Press, 2003.

9. Jeffrey M. Wooldridge (2016): Introductory Econometrics A Modern Approach (5th edition)(Chapters 3. 4 and 6)

10. Enders, W., Applied Econometric Time Series, Third Edition, Wiley.

11. Judge, Hill, Griffiths, Lütkepohl, Lee: Introduction to the Theory and Practice of Econometrics.

12. Johnston,J.andDinardo,D.:EconometricMethods,FourthEdition,McGraw-Hill,2006.

Internet Resources and Databases

1. Data and other materials for Wooldridge's textbook. www.msu.edu/~ec/faculty/wooldridge/book2.htm.

2. Data and Computer Programs for Cameron and Trivedi's textbook. www.econ.ucdavis.edu/faculty/cameron.

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Paper Eco-113
Applied Econometrics

(F.M. 50, Written – 40, IA - 10)

Course Outcomes:

After taking the course, the students will be equipped with various techniques to handle econometric data and will also have total grapes over applied econometrics. The course will provide sufficient knowledge regarding the econometric applications to households such as demand analysis, estimation of consumption function, family budget study etc. Completing this course will also provide sufficient knowledge over econometric applications to firms, money market, labour economics, investment function etc. Again, this course also contains important aspects in the construction of HDI, evaluating structural breaks, trends in macro econometric model construction and RBI- MSE macro model for the Indian economy.

Group A (Marks: 25, Written -20, IA-5)

1. Econometric applications to Indian industries:
   a. Production function estimation: CD, CES, Trans-log.
   b. Cost function estimation
   c. Employment function estimation.
   d. Capacity utilization.
   e. Growth, Volatility and Productivity

2. Econometric applications to Indian Agriculture:
   a. Agricultural Production Function
   b. Uncertainty and Risk
   c. Technological change in Indian agriculture

Group B (Marks: 25, Written -20, IA-5)

1. Indian Money and financial markets
   a. Single equation estimation of money demand function.
   b. Simultaneous equation models of money demand and money supply.
   c. Money and inflation.
   d. Contemporary issues in Indian financial markets

2. Applications to macro-econometric models:
   a. The trends in macro-econometric model construction.
   b. RBI-MSE Macro model for the Indian economy.

References:

1. Michael Intriligator (1980): Econometric Models, Techniques and Application, Prentice Hall, Private India Ltd, New Delhi.
2. K. L. Krishna edt. 1997, Econometric Applications in India, OUP
3. Jeffrey M. Wooldridge (2016): Introductory Econometrics A Modern Approach (5th edition)
4. Julia Hebden, Applications of Econometrics
5. M. Desai, Applied Econometrics
6. Kerry Patterson, An Introduction to Applied Econometrics –A Time Series Approach
7. K. L. Krishna edt. 1997, Econometric Applications in India, OUP
8. Robert Chambers (1988): Applied Production Analysis, Cambridge University Press.

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Paper Eco-114

(F.M. 50)

Course Outcomes:

After taking the course, the students will be able to review the existing literature of particular domain.

Paper Eco-114: Literature Review

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