

**BERHAMPUR UNIVERSITY**

**COURSE OF STUDIES**

**FOR**

**THE M.PHIL IN ECONOMICS**

**SEMESTERS I EXAMINATIONS – 2017**



**PUBLISHED BY:**

**BERHAMPUR UNIVERSITY**

**BHANJA BIHAR BERHAMPUR – 760 007, GANJAM (ODISHA)**

**2017**

## **Courses of Studies for M. Phil. in Economics for 2017-18**

The first semester consists of four courses of four credits each as detailed below

<b>CORE COURSES</b>		
<b>Course</b>	<b>Title</b>	<b>Credits</b>
<b>CC-1</b>	<b>Research Methodology</b>	<b>04</b>
<b>CC-2</b>	<b>Applied Econometrics</b>	<b>04</b>
<b>CC-3</b>	<b>Seminar Presentation</b>	<b>04</b>
<b>Elective Course ( One paper to be selected from the following elective courses)</b>		
<b>CORE ELECTIVES</b>		
<b>CE-1.1</b>	<b>Economic Theory</b>	<b>04</b>
<b>CE-1.2</b>	<b>Economics of Environment</b>	<b>04</b>
<b>CE-1.3</b>	<b>Economics Of Women And Work</b>	<b>04</b>
<b>CE-1.4</b>	<b>Advanced Quantitative Methods And Data Analysis</b>	<b>04</b>
<b>CE-1.5</b>	<b>Agricultural Economics</b>	<b>04</b>
<b>CE-1.6</b>	<b>Advanced Mathematical Economics</b>	<b>04</b>
<b>CE-1.7</b>	<b>Advanced Development Economics</b>	<b>04</b>

## **M.Phil ( Economics)**

### **Paper-I Research Methodology**

#### **Unit-I**

##### **Research Design:**

Meaning of Research Design, need for research design, features of good research design, concepts relating to research design, different research designs, Basic principles of Experimental design and Developing a Research plan.

#### **Unit-II**

##### **Basic principles of Social science research**

- a) Formulating problems, developing hypothesis testing hypothesis
- b) Design for the data collection, collation and interpretation, types of sampling.
- c) Report or thesis writing

#### **Unit-III**

##### **Types of Research**

- a) Survey research
- b) Field Studies
- c) Field experiments
- d) Case study approach
- e) Evaluation Research

#### **Unit-IV**

##### **Multivariate Analysis in Economics:**

Characteristics, classification and application of Multivariate Techniques, Analysis of Variance (ANOVA), Principal component analysis, Factor Analysis, Discriminate Analysis and Cluster Analysis using SPSS.

### **Paper – II Applied Econometrics**

#### **Unit-I- Lag and Simultaneous Equation Models**

Autoregressive and Distributed Lag Models-Koyak Models, Partial Adjustment Models, Adaptive Expectation, Almon Approach to distributed Lag Model, Simultaneous Equation bias and Inconsistency in OLS estimation, Methods of estimating Simultaneous Equations.

#### **Unit-II Time Series Analysis**

Stationarity, Unit root , Cointegration, Spurious Regression, Dicky Fuller Test, Engel Granger Test, Random Walk Model with and without drift, Fore casting with ARIMA modelling, Problems with VAR modelling.

### **Unit-III Panel Data Analysis**

Panel Data Techniques-Random Coefficient Model, Fixed Effect Model, Random Effect Model, Multivariate Analysis, Multivariate Probability Distribution, Multivariate Normal Distribution and Properties. Discriminant Analysis

### **Unit-IV Introduction to Econometric Software ( STATA/E VIEWS)**

Generation of data sets and data transformation; data analysis (Graphs and Plots, Summary Statistics, Correlation Matrix etc.) , Running an OLS regression; Regression Diagnostics: Collinearity, Autocorrelation, Heteroscedasticity, Estimation of Other Linear Models, Time Series Stationarity tests, Vector Auto Regression, Granger Causality

### **Paper-III Seminar Presentation**

#### **Core Elective**

### **Paper-IV Economic Theory**

#### **Unit-I**

Trends in the analysis of consumer behaviors.  
The new market theories  
The theory of Equilibrium  
The revival of General Equilibrium theory  
Trends in the development of macroeconomics

#### **Unit-II**

The theory of economic under development  
The theory of economic Growth  
Fast and modern Economic growth  
Global economic Development  
Limits to growth  
Costs of Economic growth

#### **Unit-III**

Conceptual problems about inequality  
Sources and causes of inequality

Measurement of inequality  
Promotion of equality  
Towards an egalitarian order

#### **Unit-IV**

Meaning and significance of distribution  
Theories of aggregate income distribution  
The classical theories, The Marxian theory, The Kenuession theory, Kaldor's theory,  
Weintraub's theory.

### **Paper-IV Economics of Environment**

#### **Unit-I**

Theories and method and practices:  
Ecology and Economics  
Environment and economics system

#### **Unit-II**

Economics of natural resource: scarcity, substitutability, measurement of scarce resource.  
Economic growth and environment, Limits to growth, Zero economic growth

#### **Unit-III**

Near-term and long term environmental problems Linear models of economics and environment.

#### **Unit-IV**

Spatial Environmental Model for an optimal allocation of investment.  
Pollution externalities and control, Environmental Policy

## **Paper-IV Economics of Women and Work**

### **Unit-I**

Economic Backwardness of women:

Marxian and Non-Marxian interpretation

The family as an Economic unit

Division of labour between men and women

Specialisation and comparative advantage

Role of women in the management of consumption in the household and economy.

### **Unit-II**

Allocation of time between the household and the labour market by women

Women's participation in the work force

Global trend in DCs and UDCs.

Trend in India

General differences in occupation earning

Discrimination against women

The man-women earning gap, causes and remedy.

### **Unit-III**

Economic of house work

Monetary value of a housewife.

Housework and National income.

### **Unit-IV**

Women and economic development

Women's programmes in the five year plans of India.

## **Paper-IV Advanced Quantitative Methods and Data Analysis**

### **Unit-I**

#### **Quantitative Research**

Meaning of quantitative research, process of quantitative research, quantitative data analysis, data processing, steps in data processing, analysis and interpretation.

### **Unit-II**

#### **Estimation of parameters and fitting of probabilities Distribution**

Parameter Estimation, The method of Moments, The method of Maximum Likelihood, Large Sample theory for Maximum Likelihood Estimates, Confidence Intervals from Maximum likelihood Estimates, The Bayesian approach to parameter Estimation.

### **Unit-III**

#### **Probability and Hypothesis Testing**

Role of probability in statistics – probability and uncertainty – conditional probability and its uses in economics – application of ‘Z’ , ‘t’ , ‘F’ and chi-square test in hypothesis testing – test of single mean – test of two independent mean – test of means of paired data – Non parametric tests – sign test – Wilcoxon matched paired test – analysis of variance – one way and two way ANOVA – chi-square test for independence and goodness of fit.

### **Unit-IV**

Correlation, Regression and Time Series Analysis

Application of correlation in economics – Karl spearman’s correlation coefficient – Multiple correlation – hypothesis test for correlation coefficient – Rank correlation. Regression – simple and multiple regression – OLS –assumptions – estimation and hypothesis testing – violations of assumptions – multicollinearity – heteroscedasticity – autocorrelation (Concepts) – introductions to non-linear regression.

## **Paper-IV Agricultural Economics**

**UNIT-1. Agricultural Production Functions and Farm Management:** Use of production function concepts. Forms of Production function single variable, quadratic form. Cobb – Douglas. CES and Spellman functions and their theoretical relevance in Agriculture. Least cost combination of inputs and identifying the Highest Profit Point Multiple Regression Analysis in Agricultural Production Functions.

**UNIT-2. Technological change and Agriculture Development:** Theoretical Analysis of technological change – problems of technological change and its relation to cropping pattern with a special reference to India. Farm - Management

**UNIT-3. Problems of Indian Agriculture:** Problems related to land utilization. Capital formation Problems related to the availability of agricultural credit. Rural poverty in India. Problems of small and marginal farmers, Agricultural labour problems of un-employment and under-employment in Indian agriculture.

**UNIT-4. Agricultural Policy and Development Programme in India:** Review of growth rates in Indian agriculture since Independence. Inter State disparities in agricultural-development.MSP (Minimum Supporting Price), Need for Second Green Revolution, Constraint to the development of agriculture in India, goals of the state policies, and Security and use of Nano-Technology in Indian Agriculture.

## **Paper-IV Advanced Development Economics**

**UNIT-I: Development and Growth Theories:** Harris- Todaro Model, Fei and Ranis Theory, Theory of Critical Minimum Effort, Big Push Approach., Production Function Model, Technical Progress and Growth, Kaldor Model, Romer Model of Endogenous Growth.

**UNIT-II: Development of Social Sector:** Concepts and Measurement of PQLI, HDI, and HPI, Poverty and its Measurement, Concepts and Indicators of Health and Education.

**UNIT-III: Agriculture, Industry and Rural Development:** The Structure of Agrarian Systems and the Developing World, The Economics of Agricultural Development, A Strategy of Agricultural and Rural Development., The Pattern of Industrialisation, MSME: Structure, growth, trend and productivity, Role of Industrialisation in Economic Development.

**UNIT-IV: Migration and Employment:** Migration and Development, A Verbal Description of the Todaro Model and Policy Implication, A Comprehensive Migration and Employment strategy, The Theory of Employment Determination and Developing Countries: The Classical Theory and The Keynesian Theory, Ingredients of an Employment Policy: Industrial Development and employment, Agriculture Development and employment, Employment Creation through Public Works, Employment in the Service Sector.

## **Paper-IV Advanced Mathematical Economics**

### **Unit-I**

#### **Further topics on Linear Programming and Economic Applications:**

Linear Programming application to the firm; production possibility schedule, theorem on substitution, Dynamic aspects of Linear model; The Ramsy Model

Generalised Leontiff systems; The Transformation locus, The structure of Capital stock, Fixed coefficients of production, Cost imputation, Balanced growth in the Leontiff system. The Von. Neumann Model; Inter-relations between Linear programming and Game Theory

### **Unit-II**

#### **Non-linear programming (NLP)**

The problems of NLP, The Kuhn–Tucker optimality conditions, Sufficiency of the Kuhn-Tucker conditions, NLP and conventional theory of production.

### **Unit-III**

#### **Economic Regulation; Closed-Loop Control system**

A schematic Representation, Some Economic Models in Schematic Form, Response to sinusoidal output in a Linear Model, The Feed-back transfer function, Free variation in a linear closed-loop system, Economic stabilization policy.

### **Unit-IV**

#### **Operation Research Problems**

Integer programming, Assignment Problems, Goal programming; Inventory Production Management: ABC Analysis, Project Management; Information Theory.



## **Reference**

### **Paper-I: Research Methodology**

1. John Galtung –Theory and Methods of Social Research, Columbia University Press.
2. Panels P. Forcesses– Social Research Methods, Prentice Hall.
3. Clair-Selltiz, Meris Jahoda and M. Dautach and S.W. Cook– Research Methods in Social Relations: Methun and Co. Ltd.
4. M.H. Gopal– An introduction to Research Procedure in Social Science, Asia Publishing House.
5. Dr. V. Sanmuga Sundaram– Methodology of Research in Social Science, Monorama Press, Madras.
6. Goode and Hatt– Methods in Social Research, Mc Graw Hill Book Company, London,
7. Marks S. Aldenderfer and Roger K. Meuller–Cluster Analysis.
8. Joe on Kim and Charles W. Meuller–Introduction to Factor Analysis.
9. Joe on Kim and Charles W. Meuller–Factor Analysis, Statistical Methods and Practical Issues, Sage Publications.

### **Paper-II Applied Econometrics**

1. D. N. Gujarati, D.C. Porter and Sangeetha Gunasekar, Basic Econometrics, 5th edition, McGraw Hill, 2012 Indian edition.
2. D. N. Gujarati and D.C. Porter, Basic Econometrics, 5th edition, McGraw Hill, 2012 International edition.
3. Damodar Gujarati, Econometrics by Example, Palgrave Macmillan, 2011. 4. Jeffrey M. Wooldridge, Econometrics, Indian Edition, Cengage Learning, 2009
4. Jeffrey M. Wooldridge, Econometrics, Indian Edition, Cengage Learning, 2009

### **Paper-IV Economic Theory**

1. Macro Economic theory G. Ackley (Collier Macmillan)
2. Macro Economic Themes M.J.C. Surrey (Edited) Oxford University press
3. Consumer Theory H.V. John Green Penguin Books
4. Economic theory and operation Analysis W. J. Baumol (Prentice Hall 1975)
5. A revision of Demand theory J.R Hicks (London 1956)
6. Consumer Demand: A new Approach
7. Kelvin Lancaster New York, 1971
8. The theory of Price G.I. Ctigier New York, 1968

9. The theory of Imperfect Competition: A radical Reconstruction Donald Dewey, new York 1969.
10. Towards more General Theory of value E.H. Chamberlin, New York. 1957
11. Mathematical Economics Kevin Lancaster, New York, 1968
12. The price system and Resource Allocation R.H. Leftwich Hinsdale.
13. Economic theory and under developed countries H. Myint (Oxford University Press) 1971
14. Economic Growth and structure Simon Kuznets (Oxford and IBH publishing Co. 1969)
15. The Limits to Growth Potomac Association Book.
16. The Economic Growth Controversy Ed. By Andrew weintraud, Eli Schwartz, J. Richard Aronson (Macmillan, 1974)
17. Dissent on development P.T. Bauer (Vikas Publishing house, 1973)
18. The coast of Economic Growth E. J. Mishan
19. Growth theory R.M. Solow (Clarendon Press, Oxford) 1962.

#### **Paper-IV Economics of Environment**

1. Environmental economics Vol. I
2. Edited by P. Nilkamp. Martin Nijhoff (Social Science Division Leiden, 1976)
3. Environmental economics Vol. II
4. Edited by P. Nilkamp. Martin Nijhoff (Social Science Division Leiden, 1976)
5. Economic Growth and environment Decay: The solution Becomes problems: Paul W. Barkley, David W. Sackler (Harcourt Brace Javanevich, Inc. New York, 1979)
6. Environmental Economics: Thomas D. Crocker, A.J. Rogers (The Dryden Press, Inc. Hinpdale, Illincoic, 1971)
7. The next 200 years: Harman Khan, William Brown and Leon Martel.(Vikas publishing house 1977)
8. Economics and Crisis of ecology N. Singh (Oxford university Press, 1976)
9. Scarcity and Growth Reconsidered, Edited by V. Kerry smith (The Johns Hopkins university press, Baltimore and London, 1979)
10. The Costs of economic growth E. J. Mishan ( Penguin Books)

11. The Economic Growth debate, E.J. Mishan ( George allen and Unwin, Ltd. 1977)

#### **Paper-IV Economics of Women and Work**

1. Amsden, Alice H. (En) Economics of women and work (New York: St. Martin's Press, 1980)
2. Blau. Fransine D. and Maranine A. Ferber The Economics Of women Men and work ( N.J. Prentice hall 1986)
3. Backer, Gary S. The Economics of discrimination 2<sup>nd</sup> ed, ( Ney York; st. Martin's press, 1970)
4. Engels, F. the Origin of the Family, Private Property and the state ( Mosow Progress, 1977)
5. Gulbraith, John K, Economics and the Public Purpose (New Delhi Vikas 1974), Ch. IV
6. Lloyd, Cynthia B. and Both T. Niemi The Economics of Sex Differential ( New York: Columbia University, 1979)
7. Madden, Janie F. The Economic of sex discrimination ( Lexington M.A. Lexington books, 1973)
8. Schmid, Gunther and Renate Weitzed (Eds) Sex Discrimination and equal Opportunity: The Labour Market and employment Policy ( New York; St. Martin's Press, 1984)

#### **Paper-IV Advanced Quantitative Methods and Data Analysis**

1. A.C. Chiang – Fundamentals methods of Mathematical Economics, Mc-Graw Hill, 1987.
2. Anderson et.al (2006) Statistics for business and economics.
3. D. Gujarati – Basic Econometrics, Mc-Graw Hill, New York, 2005.
4. D. Bose (2000), An introduction to mathematical economics, Himalaya publishing house.
5. John Rice (2013), Mathematical Statistics and Data Analysis. Cengage Learning, New Delhi.
6. Koutsoyiannis –Theory of Econometrics, Macmillan Press Ltd., London, 2003.
7. R. Veerachamy (2006), Quantitative Methods for Economists, New age International (p) limited, New Delhi.
8. R.G.D. Allen – Mathematical Economics, ELBS and Macmillan, 1975.
9. Taylor Sonia (2001) Business statistics, Palgrave, New York.
10. Taro Yamane –Mathematics for Economists, Prentice Hall of India, 2002.

#### **Paper-IV Agricultural Economics**

1. Sheno, P.V., Agricultural Development in India: A Strategy in Management. (Vikas Publishing House (P) Ltd)
2. Singh, Amarjit, Sadhu, AN, Fundamental of Agricultural Economics, (Himalaya Publishing House, (P) Ltd.)
3. Dwivedi,R.C. : New Strategy of Agricultural Development in India. (Loyal Books Depot, Meerut.)
4. Heady,O.E., Economics of Agricultural Production and Resource Use.(Prentice Hall India, New Delhi.)
5. Heady,O.E, Farm Management., (Prentice Hall India, New Delhi.)

6. N.C.A.E.R: A Strategy for Agricultural Planning.( N.C.A.E.R)
7. P.C. Bansir,;Agricultural Planning or 700 Million.(Lalwani Publ. House.)
- 8.Hanumantha Rao, C.H.,: Technological Change and Distribution of Gains in Indian Agriculture. (Institute of Economics Growth)
9. Jhon,P.B.: Dynamics of Indian Agriculture since Independence
10. Hatway, Dale E.: Government and Agriculture.
11. Agricultural Annual Report: Indian Council of Agricultural Research (ICAR).

#### **Paper-IV Advanced Development Economics**

1. Mishra, S.K. and Puri, V.K : Economics of Development and Planning: Theory and Practice, Himalaya Publishing House, Mumbai.
2. Barro, Robert J and Xavier Sala-i- Martin, Economic Growth, The MIT Press, Cambridge, Latest Edition.
3. Basu, Kaushik, Issues in Economic Theory, part I and II, Oxford University Press, 2010
4. Dasgupta, Dipankar: Growth Theory, Oxford University Press, 2007
5. Ghatak, S., An Introduction to Development Economics. Allen and Unwin London, latest edition.
6. Hayami, Y., Development Economics, Oxford University Press, New York, 2010 (5th Impression)
7. Hendrik Van Den Berg, Economic Growth and Development, McGraw-Hill International Edition, 2005
8. Meier, G.M., Leading Issues in Economics Development, Oxford University Press, New Delhi, Latest edition.
9. Ray Debraj, Development Economics, Oxford University Press, Latest Edition.
10. Thirlwall, A.P., Growth and Development with Special Reference to Developing Economies, Macmillan, UK, 1999.
11. Todaro, M.P., Economic Development Pearson, Latest edition.

#### **Paper-IV Advanced Mathematical Economics**

1. Allen, R. G.D. – Mathematical Economics, ELBS and Macmillan, 1973.
2. Drafman, R. Samuelson, P. Solow R. – Linear Programming and Economic Analysis, McGraw Hill Kogakusha Ltd, 1958.
3. Sharma, S.D. – Operations Research, Kailash Nath and Ram Nath and Co. 2004.
4. Baumol, W.J. – Economic Theory and Operation Analysis, Prentice Hall of India, Pvt. Ltd., 1987.