SIDHO-KANHO-BIRSHA UNIVERSITY
DEPARTMENT OF ECONOMICS

Semester Syllabus for MA in Economics
Session 2012-13 onwards

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The Hon'ble Vice Chancellor of Sidho-Kanho-Birsha University has assigned a group of experts to prepare the post graduate syllabus in Economics of this University from 2012-13 onwards in view of the changing needs of time and situation. The proposed syllabus has been designed in a manner so as to satisfy the needs of the students intending to appear in NET Examination and also those preparing for jobs in Academic, Corporate fields and NGOs in a competitive world. The salient features of the syllabus are as follows.

- Semester system has been proposed.
- There shall be 4 semesters of 250 marks each, totaling to 1000 marks.
- In all, 16 Compulsory courses of 50 marks each and 3 special courses of 200 marks each (out of three special courses students will have to select one special course) are offered. Each 200 marks special course consists of four sub courses of 50 marks each.
- The Structure of the syllabus will be as follows:

First Semester**:**	**5 Compulsory courses of 50 marks each;**
Second Semester**:**	**5 Compulsory courses of 50 marks each**
Third Semester**:**	**5 Compulsory courses of 50 marks each**
Fourth Semester**:**	**1 Compulsory course of 50 marks and 1 special course of 200 marks (out of 3 special courses). Each special course is again subdivided into 4 sub-courses of 50 marks each.**

For each course in each semester 40 marks is for examinations (duration: 2hours) and 10 marks is for internal assessment, except for courses 4.5.A, 4.5.B and 4.5.C under semester IV. The above-mentioned courses are project works.

The syllabus of the compulsory courses are in line with the UGC model curriculum with minor changes to suit present circumstances and keeping in mind the current Under-Graduate (Honours) syllabus in Economics of this University and also of other Universities of the state of West Bengal.In view of the National Academic Calendar and the general practice of allowing students to repeat courses in which they have not done well, the schedule of the semesters can be as follows

Semester	Broad Duration	Effective No of weeks
I	**July-December**	**11 weeks**
II	**January-June**	**14 weeks**
III	**July-December**	**15 weeks**
IV	**January-June**	**14 weeks**

SYNOPSIS OF THE SYLLABUS

Semester	*Courses*	*Special Courses*
I	• Microeconomics-I (ECNMA101)- Course 1.1 • Macroeconomics-I (ECNMA102)-Course 1.2 • Mathematical Economics I(ECNMA103)-Course 1.3 • Statistics (ECNMA104)-Course 1.4 • Development Economics (ECNMA105)-Course 1.5	
II	• Microeconomics-II (ECNMA201)-Course 2.1 • Macroeconomics-II (ECNMA202)-Course2.2 • Mathematical Economics II (ECNMA203)-Course2.3 • Pure Theory of International Trade (ECNMA204)-Course 2.4 • Econometrics(ECNMA205)-Course 2.5	
III	• Economics of Social Sector (ECNMA301)-Course 3.1 • Environmental Economics (ECNMA302)-Course3.2 • Resource Economics(ECNMA303)-Course3.3 • Economics of Finance (ECNMA304)-Course 3.4 • Planning and Development with reference to India (ECNMA 305)-Course 3.5	
IV	• Current Issues on Globalization with special reference to India (ECNMA401)-Course 4.1 • Econometrics and Statistics-I(ECNMA402.A)-Course 4.2.A • Econometrics and Statistics-II(ECNMA403.A)-Course4.3.A • Econometrics and Statistics-III(ECNMA404.A)-Course 4.4.A • Econometrics and Statistics-IV(ECNMA405.A)-Course4.5.A • International Economics-I (ECNMA402.B)-Course 4.2.B • International Economics-II(ECNMA403.B)-Course 4.3.B • International Economics-III(ECNMA404.B)-Course4.4.B • International Economics-IV(ECNMA405.B)-Course4.5.B • Rural Economics-I(ECNMA402.C)-Course4.2.C • Rural Economics-II(ECNMA403.C)-Course 4.3.C • Rural Economics-III(ECNMA404.C)-Course4.4.C • Rural Economics-IV(ECNMA405.C)-Course4.5.C	*Any One* from • Econometrics and Statistics (ECNMA402.A, ECNMA403.A, ECNMA404.A & ECNMA405.A) • International Economics (ECNMA402.B, ECNMA403.B, ECNMA404.B & ECNMA405.B) • Rural Economics (ECNMA402.C, ECNMA403.C, ECNMA404.C & ECNMA405.C)

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Semester	Course	Duration of Examination	Page No
I	Microeconomics-I (ECNMA101)-Course-1.1	2 hrs(for 40 marks)	6-7
I	Macroeconomics-I(ECNMA102)-Course-1.2	2 hrs(for 40 marks)	8-9
I	Mathematical Economics-I(ECNMA103)-Course-1.3	2 hrs(for 40 marks)	10-11
I	Statistics (ECNMA104)-Course-1.4	2 hrs(for 40 marks)	12
I	Development Economics (ECNMA105)-Course-1.5	2 hrs(for 40 marks)	13-14
II	Microeconomics-II(ECNMA201)-Course-2.1	2 hrs(for 40 marks)	16-17
II	Macroeconomics-II(ECNMA202)-Course-2.2	2 hrs(for 40 marks)	18-19
II	Mathematical Economics-II(ECNMA203)-Course-2.3	2 hrs(for 40 marks)	20-21
II	Pure Theory of International Trade-(ECNMA204)-Course-2.4	2 hrs(for 40 marks)	22-24
II	Econometrics(ECNMA205)-Course-2.5	2 hrs(for 40 marks)	25-26
III	Economics of Social Sector (ECNMA301)-Course-3.1	2 hrs(for 40 marks)	28-31
III	Environmental Economics(ECNMA302)-Course3.2	2 hrs(for 40 marks)	32-34
III	Resource Economics(ECNMA303)-Course 3.3	2 hrs(for 40 marks)	35-37
III	Economics of Finance(ECNMA304)-Course 3.4	2 hrs(for 40 marks)	38-39
III	Planning and Development with reference to India (ECNMA305)-Course 3.5	2 hrs(for 40 marks)	40-41
IV	Current Issues on Globalization with special reference to India(ECNMA401)-Course 4.1	2 hrs(for 40 marks)	43-46
IV	Econometrics and Statistics-I(ECNMA402.A)-Course-4.2A	2 hrs(for 40 marks)	47-48
IV	Econometrics and Statistics-II(ECNMA403.A)-Course-4.3A	2 hrs(for 40 marks)	49-50
IV	Econometrics and Statistics-III(ECNMA404.A)-Course-4.4A	2 hrs(for 40 marks)	51-53
IV	Econometrics and Statistics-IVECNMA405.A)-Course 4.5A	No written Exam	54
IV	International Economics I(ECNMA402.B)-Course-4.2B	2 hrs(for 40 marks)	55-58
IV	International Economics II(ECNMA403.B)-Course-4.3B	2 hrs(for 40 marks)	59-60
IV	International Economics III (ECNMA404.B)-Course-4.4B	2 hrs(for 40 marks)	61-63
IV	International Economics-IV(ECNMA405.B)-Course-4.5B	No written Exam	64
IV	Rural Economics-I(ECNMA402.C)-Course-4.2C	2 hrs(for 40 marks)	65-66
IV	Rural Economics-II (ECNMA403.C)-Course-4.3C	2 hrs(for 40 marks)	67-69
IV	Rural Economics-III (ECNMA404.C)-Course-4.4C	2 hrs(for 40 marks)	70-71
IV	Rural Economics-IV (ECNMA405.C)-Course-4.5C	No written Exam	72

Note: 1. Each course in each semester carries all total 50 marks out of which *40 marks is for examinations (duration: 2hours)* and *10 marks is for internal assessment*, *except for courses* 4.5.A, 4.5.B and 4.5.C under semester IV. The above-mentioned courses are project works and it carries 50 marks each [See page nos.54, 64 and 72 for details].

2. In semester IV there is only one compulsory course (course no 4.1) and three special courses (Econometrics and Statistics, International Economics and Rural Economics) . Students will have to *opt for only one special course* out of three.

DETAILED SYLLABUS

SEMESTER-I

MICROECONOMICS – I (ECNMA101)
Course 1.1
Full Marks: 50[=40(exam)+10(internal assessment)]
(55 Lectures)

Unit-I (33 lectures)
Partial Equilibrium Analysis

1. **Preference Relations and Consumer Behaviour (9 Lectures)**
    - Axioms of Consumer's choice, Indifference Curve, Utility function, Utility maximization, Interior and corner solution, Ordinary and compensated demand function, Indirect Utility function, Roy's identity, Expenditure function-properties Shephard's lemma, Additively separable utility function, Quasi-linear utility function**.**
    - Restrictions on demand function. Linear expenditure system (LES). Separability Hypothesis.
2. **Production function: (12 Lectures)**
    - Specification of technology, Input requirement set, Properties of technology – Monotonic, Convex and regular; CD, CES and Leontief technology. Returns to scale and scale elasticity, Elasticity of factor substitution, Homogenous and Homothetic production function, and case of multiple products. Cost minimization model, Derived demand for inputs, properties of cost function, Shephard's lemma. Profit Maximisation – Factor demand and Output supply function, properties of profit function, Hotelling's lemma; Duality in production
3. **Markets: (12 Lectures)**
    - Perfect Competition; Profit maximization, Derivation of SS curves under external economies, tax and welfare implications-deadweight loss.; Monopoly, welfare and output, Quality choice, Monopsony; Oligopoly Models – Cournot, Bertrand, Stackelberg and Collusive Oligopoly.

Unit-II (22 Lectures)
General Equilibrium and Welfare

1. **Welfare and General Equilibrium (22 Lectures)**
    - The Edgeworth Box, Pareto Efficient Allocations, Core of an Exchange Economy, First and Second Fundamental Theorems of Welfare Economics(statements only)

- Theory of the second Best-Arrow's Social Welfare function-General Possibility theorem (statements only)- Compensation Principle-Kaldor-Hicks-Scitovsky.
- The concept of General Equilibrium. Walrasian General Equilibrium- a Pure Exchange Model- An aggregate excess demand function- Walras Law- composite commodity theorem-existence of a general equilibrium Mechanism for attaining Walrasian general equilibrium-Tatonnment process- Uniqueness and stability of General equilibrium –Perfect and imperfect stability. Brower's fixed point theorem.

[70% of the total number of questions can be set from Unit-I and 30% of the total number of questions can be set from Unit-II. However, there can be some flexibility in marks division between the two units depending upon the actual coverage of the syllabus at the end of the semester. The Board of Studies in Economics will take final decision in this regard]

References

Gravell, H. and Reese, R. (1992): *Microeconomics*, 2nd edition, Longman, London.

Kreps, D. M. (l990) :*A. Course in Microeconomic Theory*, Princeton University Press.

Layard, P.R.G. and Walters,A.W. (1988): *Microeconomic Theory.* McGraw Hill, New York.

Mass-Colell, A., Whinston, M. and Green,J. (1995):*Microeconomic Theory,* Oxford University Press, New Delhi.

Charavarty S.R. (2010): *Microeconomics* Allied Publishers Pvt Ltd.

Hansen, B. (1970): *A Survey of General Equilibrium Systems*, McGraw-Hill Book Co.

Sen, A. (1999): *Microeconomics; Theory and Applications,* Oxford University Press, New Delhi.

Varian, H (2000): *Microeconomic Analysis*, W.W. Norton, New York

Quirk, J. and Saposnik, R.(1968) : *Introduction to General Equilibrium Theory and Welfare Economics*, McGraw Hill, New York.

Henderson,J.M. and Quandt,R.E.(1980) : *Microeconomic Theory: A Mathematical Approach,* 3rd Edition, McGraw-Hill Book Company.

Silberberg E and Suen, W.: *The Structure of Economics-a Mathematical Analysis*, 3rd edition, McGraw Hill Publishing Company, International Edition.

Johnson,S.R., Hassan, Z.A. and Green, R.D. : *Demand Systems Estimations,* The Iowa State University Press, Ames.

Malinvaud, E. (1976) : *Lectures on Microeconomic Theory,* North Holland Publishing Company.

Graff, J.D.E.V.(1975) : *Theoretical Welfare Economics,* Vikas Publishing House.(For Compensation Principle)

Bator, M. F. (1957): "The Simple Analysis of Welfare Maximisation", *American Economic Review,*vol 47. Reprinted in Townsend (ed): *Readings in Price Theory*, Penguin.

MACROECONOMICS – I (ECNMA102)
Course 1.2
Full Marks: 50[=40(exam)+10(internal assessment)]
(66 Lectures)

Unit-I(44 Lectures)
Foundations of Macroeconomic Theory

1. **Revision of Basic ideas** **(7 Lectures)**
   - Simple Keynesian model (open economy version-with and without repercussion effects)
   - IS-LM model
2. **The Three-sector Keynesian Model** **(8 Lectures)**

   Aggregate demand (CM)–Aggregate supply (NN) version of the Keynesian model, definition of involuntary unemployment, unemployment equilibrium, differences of Keynes with the classical ideas.

3. **Disequilibrium Interpretation of Keynesian Unemployment** **(14 Lectures)**

   Disequilibrium Models of Patinkin, Clower and Barro-Grossman.

4. **The Theory of Money Supply** **(8 Lectures)**

   Definitions of money supply. Balance sheet interpretation of money supply. Inside money and outside / high powered money-definition and balance sheet interpretation. Money multiplier Theory. Budget Deficit ,Deficit financing and Money Supply-Indian examples. The concept of credit rationing and its implications for money multiplier theory. Statutory Liquidity Ratio vs Open Market Operations as instruments of monetary control in the Indian context.

5. **Elements of Open Economy Macroeconomics** **(7 Lectures)**

   Macroeconomic equilibrium using open economy IS-LM versions under fixed and flexible exchange rates.Small economy model and two-country model. World capital Market equilibrium.

Unit-II(22 Lectures)
Exogenous Growth Theory

1. **Revision of Basic ideas of Growth Theory: Models of Harrod and Domar** **(3 Lectures)**
   - Harrod-Domar Models

2. The Solow-Swan Model (8 Lectures)

- Steady-state equilibrium-Effects of increase in savings rate-Golden Rule of capital accumulation-Impact of technological progress-absolute versus conditional convergence-applicability of the model.
- Neutrality of Technical Progress and Returns to scale-different types of technological progress-technical progress function.

3. Two-Sector Growth Model (4 Lectures)
Uzawa's model

4. The Kaldor Model (4 Lectures)

- Equlibrium and stability-Impact of technological progress.

5. Ideas of Pasinetti, Meade and Joan Robinson in the theory of economic growth (3 Lectures)

[70% of the total number of questions can be set from Unit-I and 30% of the total number of questions can be set from Unit-II. However, there can be some flexibility in marks division between the two units depending upon the actual coverage of the syllabus at the end of the semester. The Board of Studies in Economics will take final decision in this regard]

References

Dasgupta D.(1998) :*The Macroeconomy : A Text Book View,* Oxford University Press, New Delhi.

Dasgupta, D.(2005) : *Growth Theory: Solow and his Modern Exponents,* Oxford University Press, New Delhi.

Patinkin D.(1965) : *Money, Interest and Prices,* Harper and Row

Dornbusch, R(1980) : *Open Economy Macroeconomics,* Cambridge University Press

Barro, R.I. and Grossman, H.I(1971) : "A General Disequilibrium Model of Income and Employment", *American Economic Review,*March1971, Vol61(1):82-93.

Mueller, M.G. (ed) (1978): *Readings in Macroeconomics,* Surjeet Publications, New Delhi.

Blaug, M. (1978): *Economic Theory in Retrospect,* Cambridge University Press.

Ackley, G. (1978) : *Macroeconomics: Theory and Policy,* Macmillan, New York.

Rakshit, M(1987) : *Money, Credit and Monetary Policy,* SBI Lectures.

Levacic, R and Rebman,A. (1986) : *Macroeconomics*; 2nd Edition, Macmillan.

Froyen, R.T. (2007) : *Macroeconomics : Theories and Policies,*8th Edition, Pearson Education.

Sen, A(ed) (1960): *Growth Economics,* Harmondsworth, Penguin Books

Barro,R.J. and Sala-i-Martin, X. (1998) : *Economic Growth,* MIT Press, Cambridge, Massachusetts.

Solow,R.M. (2000) :*Growth Theory :An Exposition,*2nd Edition, Oxford University Press, USA.

Romer, D (2001) : *Advanced Macroeconomics,* McGraw-Hill International Edition

MATHEMATICAL ECONOMICS – I (ECNMA103)
Course 1.3
Full Marks: 50[=40(exam)+10(internal assessment)]
(48 Lectures)

1. Static Optimization (18 Lectures)

- Global/Local; Unconstrained optimization (single variable case) First Derivative Test, Second Derivative Test, (Unconstrained optimization) – Multi-variable case-Hessian determinants. Homogeneous and Homothetic functions.
- Convexity and concavity conditions, local-global theorem.
- Constrained optimization. Lagrange multiplier method-Bordered Hessian determinants. The Slutsky equation and its implications. Constrained Multi-variable optimization with Equality Constraints.
- Constrained multivariate optimization with inequality constraint.
- Kuhn- Tucker Conditions, Graphical Solution, Economic Interpretation of Kuhn – Tucker Conditions.Constraint Qualification-Kuhn-Tucker Sufficiency Theorem-Economic Applications.
- Envelope Theorem and its Applications.
- Jacobian determinants and existence of solution

2. Linear Programming with Economic Applications (12 Lectures)

- Standard and Canonical form of LP Problem-graphical implications-applications in Economics
- The concept of Basic Feasible Solution. Theory of Simplex Method. Simplex Algorithm – Maximization Case, Minimization case; Exceptional Situations in LP Solution
- Duality Theorems; Primal-Dual Relationship; Economic Interpretation of Duality.

3. Input-Output Analysis (12 Lectures)

- Leontief Static Open Model-primary input vector-final demand vector-the output system. The Hawkins-Simon condition -algebraic and graphical proof and economic interpretation. The Solow condition. The price system with economic implications. The substitution theorem.
- Leontief Static Closed Model-Determination of relative output-Hawkins-Simon condition with economic interpretation.
- Basic ideas of Leontief Dynamic Model.
- Linkage Analysis: Different types, Measurement of Linkages.

4. Stability of Equilibrium in a 2× 2non-differential equation system- Phase diagram techniques (6 Lectures)

- Qualitative solutions of non-linear differential equations .Non-linear differential simultaneous equations. Phase diagram techniques. Stability check: Concepts of stable node, stable focus, unstable node, unstable focus, saddle point etc. Use of characteristic equations and characteristic roots in determining stability. Economic applications of phase diagram techniques in macroeconomic theory and growth theory.

References

Allen, R. G. D. (1974): *Mathematical Analysis for Economists,* Macmillan Press and ELBS. London

Baumol, W. J. (1984): *Economic Theory and Operations Analysis,* Prentice Hall, Englewood Cliffs, New Jersey.

Chiang, A. C. (1986): *Fundamental Methods of Mathematical Economics,* McGraw Hill, New York.

Dixit, A.K(1989).:*Optimization in Economic Theory,* Oxford University Press.

Henderson,J.M. and Quandt,R.E.(1980) : *Microeconomic Theory: A Mathematical Approach,* 3rd Edition, McGraw-Hill Book Company.

Hands, D. W. (2004) : *Introductory Mathematical Economics,* 2nd Edition, Oxford University Press, New York.

Gravell,H. and Reese,R. (1992): *Microeconomic Theory,* Longman, London (2nd Edition)

Hadley, G. (1962): *Linear Programming,* Addison Wesley, Publishing Co. Massachusetts.

Dorfman,R., Samuelson, P.A. and Solow, R.M. (1958) : *Linear Programming and Economic Analysis,* McGraw-Hill Book Company.

Intriligator, M.D. (1971): *Mathematical Optimization and Economic Theory,* Prentice Hall, Engelwood Cliffs.

Lancaster, K(1968): *Mathematical Economics* ,Macmillan, New York.

Silberberg E and Suen, W.: *The Structure of Economics-a Mathematical Analysis,* 3rd edition, McGraw Hill Publishing Company, International Edition.

Leontief, W. (1966): *Input-Output Economics,* Oxford University Press, New York.

Pal, D.P. : *Structural Interdependence and Development,* Himalaya Publishing House, Bombay.

Kundu, A.(1976): *Input-output Framework and Economic Analysis,* K. B. Publications, New Delhi.

Sydsacter, K. and Hammond, P.J. *: Mathematics for Economic Analysis,* Pearson Education.

STATISTICS (ECNMA104)
Course 1.4
Full Marks: 50[=40(exam)+10(internal assessment)]
(33 Lectures)

1. **Sampling**: **(9 Lectures)**
   - Basic principles of sample survey, different steps in a large scale sample survey, randomness and bias, Technique of Random sampling, SRSWR and SRSWOR, Basic ideas of stratified random sampling.
2. **Sampling distributions**: **(6 Lectures)**
   - Standard normal, chi square, t (Student's t and Fisher's t), F:
   - For each distribution-- Form of variate with example, p.d.f, properties (without derivation), uses.
3. **Estimation** **(9 Lectures)**

- Point Estimation – Desirable Properties of Point Estimator; Maximum Likelihood estimation- Maximum Likelihood Estimator and their Properties.
- Interval Estimation – Interval Estimators of Population Mean, Population Variance, difference of mean and variance ratio.

4. **Testing of Hypothesis** **(9 Lectures)**

- Neyman-Pearson Theory of Testing of Hypothesis – Type I & Type II Errors and Power of Test.
- Simple Parametric Tests based on τ, t, χ^2 and F Distributions – Small Sample Tests, Large Sample Tests.

References

Chou, Y. (1975): *Statistical Analysis,* Holt, Reinhart and Winston, New York

Goon, A. M., Gupta,M. K. and. Dasgupta,B. (1993) :*Fundamentals of Statistics,* Vols l & 2, The World Press Ltd. Calcutta.

Gupta, A.(1988) : *Groundwork of Mathematical Probability and Statistics,* Academic Publishers.

Gupta, S.C. and Kap oor ,V.K. (2002) : *Fundamentals of Mathematical Statistics,* Sultan Chand and Sons, New Delhi, 11th edition.

Hogg. R. V. and Craig, A. T. (1970): *Introduction to Mathematical Statistics* (3rd Edition)

Millar, J. (1996): *Statistics for Advanced Level,* Cambridge University Press, Cambridge.

Nagar, A. L. and Das, R. K. (1993): *Basic Statistics,* Oxford University Press, New Delhi.

Spiegel, M. R. (1992): *Theory and Problems of Statistics,* McGraw Hill Book Co. London.

DEVELOPMENT ECONOMICS (ECNMA105)
Course 1.5
Full Marks: 50[=40(exam)+10(internal assessment)]
(33 Lectures)

1. Growth and Development: An Introduction **(4 Lectures)**

- Theories of Economic Growth
- Endogenous Growth Model
- Convergence
- Distribution and Development

2. Poverty, Economic Inequality and Under nutrition **(4 Lectures)**

- Poverty: Preliminary observations
- Measurement of Poverty
- Vicious Circle of Poverty
- Economic Inequality and its Measurement
- Poverty, Inequality, Income and Growth
- Poverty and Under nutrition

3. The Dual Economy **(10 Lectures)**

- Structure of the dual economy
- Inter sectoral resource flows: Lewis model
- Rural-Urban Migration: Harris-Todaro model
- Rural-Urban wage gap
- Unemployment and surplus labour

4. Markets in the Economy **(8 Lectures)**

- Land
- Labour
- Credit
- Interlinkage of markets

5. Issues in Micro- Finance **(7 Lectures)**

- Introduction to micro-finance

- Micro Finance mechanisms : Peer Selection, Peer monitoring and dynamic incentives-solution to moral hazard, adverse selection, and costly state verification;
- Country Experiences

- Strength and weaknesses of micro –finance programme

References

Ray, D. *Development Economics*, Oxford University Press

Sen, A. *Poverty and Famines: An Essay on Entitlement and Deprivation* Oxford University Press

Basu, K.: The Less Developed Economy, Basil Blackwell.

Basu, K.: Analytical Development Economics, MIT Press

Harris J.R. and Todaro, M.P. (1970) : " Migration, Unemployment and Development : A Two- Sector Analysis", *American Economic Review*, 60: 126-142.

Corden, W.M. and Findlay, R (1975) : "Urban Unemployment, Intersectoral Capital Mobility and Development Policy", *Economica*, 29: 59- 78.

Harper, M.(ed) (2003): *Microfinance: Evolution, Achievements and Challenges* , I.T.D.G. Publishing Company.

Fisher, T and Sri Ram (2003): *Beyond Microcredit: Putting Development Back into Microfinance*, Sage Publishing Company.

Articles on Microfinance from *Journal of Development Economics*

Jones R.W(1979): *International Trade: Essays in Theory*, Amsterdam, North Holland

Chaudhuri, S. and Mukhopadhyay, U (2009): *Revisiting the Informal Sector: A General Equilibrium Approach*, New York, Springer.

Parikh K.S. and Sudarshan, R.(1993): *Human Development and Structural Adjustment*, MacMillan India Ltd., Madras.

National Human Development Report (2002), Planning Commission. Oxford University Press.

Various Human Development Reports, UNDP

Indian Human Development Reports

State Human Development Reports

DETAILED SYLLABUS

SEMESTER-II

MICROECONOMICS – II (ECNMA201)
Course 2.1
Full Marks: 50[=40(exam)+10(internal assessment)]
(45 Lectures)

1. Theory of Uncertainty (12 Lectures)

- Distinction between risk and uncertainty-Individuals behaviour towards risk-Contingent Consumption- Von-Neumann –Morgenstern expected utility function-Properties- uniqueness of the expected utility function – positive affine transformation-consumer's equilibrium under uncertainty- utility function and the measures of risk –aversion-example Gambling and Insurance -Risk Aversion-Arrow-Pratt measures of risk aversion-absolute and relative measures- -Convexity of Indifference curves and the shape of Von-Neumann-Morgenstern utility function-Allocation of wealth to risky asset. Theory of firm under uncertainty.

2. Economics of Information (12 Lectures)

- Limited Information about Quality. The market for Lemons. Adverse Selection. Moral Hazard.
- Solving the Problem: Cases of Equal Information. Signalling.
- The Principal-Agent Problem. Value of Information.

3. Selected topics on Industrial Organization (12 Lectures)

- Structure, conduct and performance paradigm
- Cournot market structure in n-seller game; Cournot market structure with heterogeneous firms
- Bertrand model. Price game with differentiated product.
- Durable goods monopoly: concepts of renting and selling, natural monopoly.
- Concept of price regulation; multi-product pricing, Auman – Shapley pricing, Ramsey pricing, concept of two part tariff
- Concentration, merger and entry deterrence
- Concept of Advertising, Dorman-Steiner condition, Advertising and Market Structure

References

Varian, H. R(1978).: *Microeconomic Analysis,* W.W. Norton, New York

Varian, H. R(1993).: *Intermediate Microeconomics : A Modern Approach*, 3rd Edition, W.W. Norton, New York

Silberberg E.(1990): *The Structure of Economics-a Mathematical Analysis*, 2nd edition, McGraw Hill Publishing Company.

Hands, D. W. (2004) : *Introductory Mathematical Economics*, 2nd Edition, Oxford University Press, New York.

Maddala, G.S. and Miller,E.(1989): *Microeconomics-Theory and Applications*, McGraw Hill, New Delhi.

Gravell, H. and Reese, R. (1992): *Microeconomics*, 2nd edition, Longman, London.

Kreps, D. (1990): *A Course in Microeconomic Theory*, Princeton University Press, New Jersey.

Mass-Colell, A., Whinston,M. and Green,J. (1995); *Microeconomic Theory*, Oxford University Press, New Delhi.

Baumol, W.J.(1966): *Economic Theory and Operations Analysis*, Prentice Hall, New Delhi.

Koutsoyannis, A.(1979): *Modern Microeconomics*, Macmillan Press, London.

Layard, P.R.G. and Walters,A.W. (1988): *Microeconomic Theory.* McGraw Hill, New York.

Salvatore, D. (2004): *Managerial Economics in a Global Economy with Economic Applications*,5th edition, CENGAGE Learning/South Western.

Henderson,J.M. and Quandt,R.E.(1980) : *Microeconomic Theory: A Mathematical Approach*, 3rd Edition, McGraw-Hill Book Company.

Charavarty S.R. (2010): *Microeconomics* Allied Publishers Pvt Ltd.

Sen, A. (1999): *Microeconomics; Theory and Applications*, Oxford University Press, New Delhi.

Tirole,J. (1988) : *The Theory of Industrial Organization*, MIT Press, Cambridge.

Sen, A. (1996): *Readings in Economics: Industrial Organization*, Oxford University Press, New Delhi.

Shy Oz. (1995) : *Industrial Organization*, Cambridge University Press.

Mookherjee, D. (1995): *Indian Industry: Policies & Performances*, Oxford University Press, New Delhi.

Chakravarty, S.R. (1996): *Issues in Industrial Economics*, 2nd Print, Avebury, Aldershot.

MACROECONOMICS – II (ECNMA202)
Course 2.2
Full Marks: 50[=40(exam)+10(internal assessment)]
(84 Lectures)

Unit-I (56 Lectures)

Macroeconomic Models

1. New Classical Macroeconomics and Rational Expectations Theory (12 Lectures)

- Basic ideas of New Classical Macroeconomics. The Rational Expectations Theory-meaning-Differences with Adaptive Expectations.
- The Lucas Imperfect Information Model and Rational Expectations. Implications and Limitations- The Phillips Curve and Lucas critique.

2. Staggered Price Adjustment (12 Lectures)

- A model of imperfect competition and price setting.
- Predetermined Prices
- Fixed Prices- the methods of undetermined coefficients and lag operators

3. Real Business Cycle Theory (20 Lectures)

- A Baseline Real Business Cycle Model.
- Household Behaviour.
- A Special Case of the Model and its Solution.
- Productivity Shocks, Consumption and Capital Accumulation.
- Output and Employment Fluctuations.
- Unemployment, Heterogeneity, Shocks and Imperfect Information

4. New Keynesian Macroeconomics(at least four of the following topics to be covered) (12 Lectures)

- Menu costs and the need for real rigidity
- Co-ordination failure models and real non-Walrasian theories
- Efficiency wage model and the theories of unemployment.
- Shapiro-Stiglitz Model
- Implicit contract
- Insider-outsider model

- Hysteresis
- Search and matching models

Unit-II (28 Lectures)

Endogenous Growth Theory

1. **Foundations to Endogenous Growth Theory : Infinite Horizon and Overlapping-Generations Model (12 Lectures)**
    - The Ramsey-Cass-Koopmans Model. Assumptions- the behavior of households and firms-the dynamics of the economy-the balanced growth path-the effects of a fall in the discount rate, the effects of government purchases.
    - The Diamond model. Assumptions-household behavior-the dynamics of the economy-the possibility of dynamic efficiency-government in the Diamond model.
2. **Endogenous growth model (16 Lectures)**
    - Framework and assumptions : differences with exogenous growth
    - Introduction to endogenous growth theory
    - Models of Lucas ,Romer and Barro

[70% of the total number of questions can be set from Unit-I and 30% of the total number of questions can be set from Unit-II. However, there can be some flexibility in marks division between the two units depending upon the actual coverage of the syllabus at the end of the semester. The Board of Studies in Economics will take final decision in this regard]

References

Mankiw, N.G. and D. Romer (ed.) (1991): *New Keynesian Economics*, 2 volumes, MIT Press, Cambridge.

Romer, D (2001) : *Advanced Macroeconomics,* McGraw-Hill International Edition

Dasgupta D.(1998) :*The Macroeconomy : A Text Book View,* Oxford University Press, New Delhi.

Froyen, R.T. (2007) : *Macroeoconomics : Theories and Policies* 8th Ed, Pearson Education.

Barro, R.J. and Sala-i-Martin, X. (1998) : *Economic Growth,* MIT Press, Cambridge, Massachusetts.

Solow,R.M. (2000) :*Growth Theory :An Exposition,*2nd Edition, Oxford University Press, USA.

Lucas, R.E Jr.(1988) : "On the Mechanics of Economic Development", *Journal of Monetary Economics,* 22(July) : 3-42.

Romer, P.M. (1990):"Endogenous Technological Change", *Journal of Political Economy*, 98,October (part 2) :S71-S102.

Barro, R. J. (1990): "Government Spending in a Simple Model of Endogenous Growth", *Journal of Political Economy*, 98(5): S103-S125.

MATHEMATICAL ECONOMICS – II (ECNMA203)
Course 2.3
Full Marks: 50[=40(exam)+10(internal assessment)]
(70 Lectures)

Unit-I(42 Lectures)

Game Theory

1. Static games of complete information (12 Lectures)

- Normal (Strategic) form representation of non-zero sum games: Iterated elimination of strictly dominated strategies- concept of Nash equilibrium- Examples of pure Strategy equilibria: Non existence of pure strategy equilibria; Prisoners' Dilemma-Multiple Nash Equilibria; Cournot model of duopoly – final offer arbitration, the problem of the commons- mixed strategies.

2. Dynamic game with complete information (15 Lectures)

- Extensive Form Games; multistage Games; Extensive Form, Multistage Games with observed actions - Commitments; Strategies and Equilibria in Extensive Form games concept of backward induction - Stackelberg game - wages and employment in a unionised firm. Two stage game of complete but imperfect information – concept of sub-game; concept of information set; Sub game perfect Nash equilibrium - three period bargaining game - two stage repeated games; Repeated games with observed actions Infinitely repeated games – concept of trigger strategy- folk theorem

3. Static game of incomplete information (10 Lectures)

- Cournot competition under asymmetric information.- normal form representation of static Bayesian games, concept of static Bayesian Nash equilibrium- battle of the sexes game in the framework of static game with incomplete information.

4. Dynamic game with incomplete information (5 Lectures)

- Basic ideas. Concept of sequential Rationality, concept of perfect Bayesian equilibrium.

Unit-II (28 Lectures)

Dynamic Optimization

1. Dynamic Optimization Theory (28 Lectures)

- Lagrangian vs Hamiltonian . Control theoretic problem. Use of Hamiltonian-finite and infinite time horizon cases with discrete and continuous time points. The control, state and co-state variables. The steady-state.

- Current value Hamiltonian. Difference with present value Hamiltonian. Finite and infinite time horizon cases with discrete and continuous time points.
- Economic applications of control theory.

[70% of the total number of questions can be set from Unit-I and 30% of the total number of questions can be set from Unit-II. However, there can be some flexibility in marks division between the two units depending upon the actual coverage of the syllabus at the end of the semester. The Board of Studies in Economics will take final decision in this regard]

References

Gibbons, R. (1992): *Game Theory for Applied Economists*, Princeton University Press, Princeton, New Jersey.

Kreps, D. (1990): *Game Theory and Economic Modelling*, Oxford University Press, Oxford.

Kreps, D. (1990): *A Course in Microeconomic Theory*, Princeton University Press, New Jersey.

Fudenberg, D., and Tirole, J. (1991): *Game Theory*, MIT Press, Cambridge, Massachusetts.

Mass-Colell, A., Whinston,M. and Green,J. (1995); *Microeconomic Theory*, Oxford University Press, New Delhi.

Charavarty S.R. (2010): *Microeconomics* Allied Publishers Pvt Ltd.

Sen, A. (1999): *Microeconomics; Theory and Applications*, Oxford University Press, New Delhi.

Chiang, A. C. (1992) : *Elements of Dynamic Optimization*, McGraw-Hill, Inc.

Conrad, J.M. and Clark, C.W (1987): *Natural Resource Economics: Notes and Problems*, Cambridge University Press.

PURE THEORY OF INTERNATIONAL TRADE (ECNMA204)
Course 2.4
Full Marks: 50[=40(exam)+10(internal assessment)]
(56 Lectures)

1. Comparative and Absolute Advantage (7 Lectures)

- Adam Smith's theory of absolute advantage. Ricardian theory of comparative advantage. Relative supply curve. Role of demand. Extension to multi-commodity case of comparative advantage theory. Limitations of Ricardian Theory.

2. Heckscher-Ohlin Theory (6 Lectures)

- Price definition and physical definitions of relative factor abundance relationships between commodity price ratio and factor price ratio. The homotheticity assumption in the context of physical definition.
- The meaning of factor-intensity reversal. Factor-intensity reversal and validity of Heckscher-Ohlin Theorem under price and physical definitions.
- The concept of cone of diversification. Incomplete specialization, factor price equalization, factor-intensity reversal and the cone of diversification.

3. Jones (1965) Heckscher-Ohlin-Samuelson type model (6 Lectures)

- Jones (1965) general equilibrium trade model for a small open economy. The role of the decomposability property.
- Equivalence of Factor-intensity conditions in physical and value terms. The Rybczynski Theorem. The Stolper-Samuelson Theorem-the price magnification effects.
- Effects on welfare. Policy implications of Jones (1965) model.

4. Jones (1971) Specific-factor model (6 Lectures)

- The basic structure-indecomposable nature of the model-implications of the indecomposable structure. Invalidity of Jones (1971) model in the presence of fixed coefficient technology. Impact of terms of trade on income earnings (factor earnings)-idea about inequality in earnings-modifications of the price magnification effects-role of elasticity of marginal productivity of labour-elasticity of substitution. Policy implications of the model.

5. Trade with labour market distortions (6 Lectures)

- Distortions in Jones (1965) and (1971) models in terms of rigidity of manufacturing wage rate. The Harris –Todaro(1970) model and the Corden-Findlay (1975) model with migration-equilibrium condition.
- Modification of the capital-intensity condition in physical terms and validity of the Rybczynski and Stolper-Samuelson Theorems in Harris-Todaro (1970)/ Corden-Findlay (1975) model.

6. Trade and welfare (8 Lectures)

- Gains from trade : Gains from exchange and gains from specialization. . Free trade is better than no trade. No trade is better than restricted trade.
- Foreign capital and welfare-the Brecher-Alejandro(1977) proposition. The Brecher-Alejandro(1977) proposition examined in terms of Jones (1971), Corden-Findlay (1975) and three-sector hybrid model like Beladi-Marjit(1992).Foreign capital, Gini coefficient and welfare. Foreign capital and informal sector.

7. Theory of Tariffs and Quotas (8 Lectures)

- Tariff and quota-partial equilibrium effects, general equilibrium effects, optimum tariff, Metzler's paradox. Monopoly effects of tariffs and quotas. Tariff vs quota. Tariff and welfare.

8. North-South Trade Models (9 Lectures)

- General introduction to North-South Model
- Selected North-South Models: Models by Findlay (1980), Sarkar(1989), Chichilinski(1994) etc.

References

Books

Caves R, Frankel J.A. and Jones R.W(1990): *World Trade and Payments*, Boston, Little, Brown and Co.

Krugman P.R.and Obstfeld M. (1991) : *International Economics : Theory and Policy*, 2nd Edn, New York, Harper-Collins.

Chacoliades,M. (1978) :*International Trade : Theory and Policy*, New York, McGraw hill.

Sodersten, B. and Reed G.(1994) : *International Economics* , Macmillan, London, 3rd edition

Batra R.N(1972): *Studies in the Pure Theory of International Trade*, Macmillan

Jones R.W(1979): *International Trade: Essays in Theory*, Amsterdam, North Holland

Chaudhuri, S. and Mukhopadhyay, U (2009): *Revisiting the Informal Sector : A General Equilibrium Approach* , New York, Springer.

Gandolfo, G. (2006): *International Trade Theory and Policy,* Springer International Edition.

Jones, R.W. (2000): *Globalization and the Theory of Input Trade*, The MIT Press.

Marjit, S. (2008): *International Trade and Economic Development: Essays in Theory and Policy*, Oxford University Press, New Delhi.

Articles

Batra,,R.N.and Naqvi, N. (1987) : "Urban Unemployment and the Gains from Trade", *Economica,* 54 : 381-395

Beladi ,H and Marjit,S (1992) : "Foreign Capital and Protectionism", *Canadian Journal of Economics*, 25 : 233-238

Chandra, V. and Khan, M.A. (1993) : " Foreign Investment in the Presence of an Informal Sector", *Economica*, 60 : 79-103.

Chichilinski, G. (1994): "North-South Trade and Global Environment", *American Economic Review*, 84(4):857-875.

Corden, W.M. and Findlay, R(1975) : "Urban Unemployment, Intersectoral Capital Mobility and Development Policy", *Economica,* 29: 59- 78.

Findlay, R. (1980) : "The Terms of Trade and Equilibrium Growth in the World Economy", *American Economic Review*,70(3): 291-299.

Gupta, M.R. (1994): "Foreign Capital, Income Inequality and Welfare in a Harris-Todaro Model", *Journal of Development Economics,* 45: 407-414.

Gupta, M.R. (1997): "Foreign Capital and the Informal Sector: Comments on Chandra and Khan", *Economica,* 64: 353-363.

Harris J.R. and Todaro, M.P. (1970) : " Migration, Unemployment and Development : A Two-Sector Analysis", *American Economic Review,* 60: 126-142.

Jones, R.W. (1965): "The Structure of Simple General Equilibrium Models", *Journal of Political Economy,* 73: 551-572.

Jones, R.W. (1971):" A Three Factor Model in Theory, Trade and History" in Bhagwati, Jones, Mundell and Vanek (eds) '*Trade, Balance of Payments and Growth*' , North Holland, Chap1 : 3-21.

Khan M. A. (1980) : "The Harris-Todaro Hypothesis and the Heckscher- Ohlin-Samuelson Trade Model : A Synthesis", *Journal of International Economics,* 10 : 527-547.

Sarkar, A.(1989) : "A Keynesian Model of North-South Trade", *Journal of Development Economics,*30: 179-188.

ECONOMETRICS (ECNMA205)
Course 2.5
Full Marks: 50[=40(exam)+10(internal assessment)]
(56 Lectures)

1. Classical Linear Regression Model (15 Lectures)

- Two-variable and K-variable CLRM – Assumptions, Estimation (using OLS & ML Method), Properties of Estimators, ANOVA in CLRM, Inference Analysis, Prediction, Applications.

6. Violation of the OLS Assumptions : Heterosedasticity (8 Lectures)

- Meaning of heteroscedasticity. Problems created by its Presence, Testing for its presence, Estimating Methods in its Presence. Tests for heteroscedasticity.

7. Violation of the OLS Assumptions : Autocorrelation (9 Lectures)

- Meaning of Autocorrelation. Problems created by its Presence. Concept of autoregression. Testing for its presence Estimating Methods in its Presence.

8. Violation of the OLS Assumptions : Multicollinearity (6 Lectures)

- Meaning of multicollineaity, Problems created by its presence, Testing for its Presence, Estimating Methods in its Presence.

9. Regression with Qualitative Regressors (9 Lectures)

- Dummy Independent Variables – When to use; Classification system; Dummy Variable Trap; Interpretation of estimated coefficients; Class-effect and Interaction-effect; Applications

10. Applied Econometrics (9 Lectures)

- The identification problem with demand-supply illustrations
- Estimation of demand function : basic ideas
- Estimation of Cobb-Douglas production function

References

Johnston, J. (1977 and 1984): *Econometric Methods*, 2nd and 3rd Editions, McGraw Hill.

Johnston,J. and Dinardo,J. (1997) : *Econometric Methods*,4th Edition, McGraw Hill International Edition

Maddala, G.S.(1988) : *Introduction to Econometrics,* Macmillan, London.

Maddala, G.S. (1997): *Econometrics*, McGraw Hill, New York.

Gujarati, D.N. (1995): *Basic Econometrics* 4th Edition, McGraw Hill, New Delhi

Wooldrige, J.M.(2009) : *Econometrics,* Cengage Learning, India Edition

Nachane, D.M. (2006) : *Econometrics: Theoretical Foundations and Empirical Perspectives,* Oxford University Press ,New Delhi.

Greene, W.H. (2000): *Econometric Analysis*, Prentice Hall International.

Desai, M.(1976).: *Applied Econometrics,* P. Allen.

Klein, L.R.(1975) : *A Text Book of Econometrics*: Prentice Hall, New Delhi.

Intrilligator, M.D. (1978): *Econometric Methods, Techniques and Applications*, Prentice Hall, New Jersey

DETAILED SYLLABUS

SEMESTER-III

ECONOMICS OF SOCIAL SECTOR (ECNMA301)

Course-3.1

Full Marks:50[=40(exam)+10(internal assessment)]

(52Lectures)

1. Concepts of poverty and well-being (8 Lectures)

- Conventional measures of poverty
- IFPRI's measures of 'subjacent', 'medial' and 'ultra' poverty—the global scenario.
- UNDP's concept of Multidimensional Poverty Index (MPI).
- Hunger Index—methodology—the global scenario.
- A disaggregated view of the concept of well-being.

2. Sen's 'Capability' approach to development (4 Lectures)

- 'Development as expansion of freedom'
- Issues related to Human Development

3. Development and Social Sector (6 lectures)

- Concepts of social security: Promotive and Protective notions; Poverty, Unemployment and Deprivation: Measures and Indicies.
- Paradigm Shift and Critiques of Different Approaches to Development: Human Resource Development (HRDA), Human development (HDA), Basic Needs, Entitlement and Capability.
- Economic Reforms and Effects of Structural Adjustment Policies.

4. Vulnerability and Safety Nets (6 lectures)

- Economic and Social Insecurity of Labour: informal sector activities, migrant workforce, contract and casual labour;
- Inequality with respect to gender, caste, tribe regional and other variations;
- Effects of flexibility and globalisation on the labour market.

5. Food security (4 lectures)

- Food production, availability and access;
- Nutritional status of rural and urban households, men and women,
- Public distribution system, W T O and food security.

6. Poverty, Population Growth and Development (6 lectures)

- Population growth rates, regional variation in sex ratio, life expectancy, age structure, infant and child mortality rates; Population policy: shift from control of population to welfare.
- Demographic data base in India, census data, national family health survey, household survey. Study of fertility and mortality: levels, trends, socio-economic factors, reproductive health, social impact of new reproductive technologies and regulation.
- Persistence of Poverty, Income Poverty and other dimensions, Well-being in the 1990s

.

7. Education and Development (6 lectures)

- Role of human capital, human versus physical capital; Exclusion from education.
- Demand: private and social; determinants of demand; expenditure on education, private cost, social cost, wastage and stagnation;
- Educational Policies with emphasis on India, achievements and constraints
- Resource mobilization, educational reforms.

8. Health Economics (8 lectures)

- Health and development, performance and possibilities — interconnection with poverty, malnutrition and environmental issues;
- Economic dimensions of health care, demand and supply, financing, constraints;
- Role of Institutions: public and private health care, PPP model;
- Evaluation of Policy and reforms: inequalities in health - class, caste, gender perspectives and regional biases;
- Health Insurance and Market Imperfections: Managed care System, Third Party Administrator, Community Based Health Insurance.

9. Gender and Development (4 lectures)

- Women as a constituency in development, GDI and GEM ;
- Participation in productive and unproductive work, visibility of work, paid and unpaid labour, agriculture, industry and informal sector labour, wage differential, skill and technology;
- Access to resources, land rights, credit, micro-finance and self-help groups.
- Women in the Peasant Household-time allocation and economic role of peasant farm women etc.

References

Parikh, K.S. and Radhakrishna, R.(2002) : *India Development Report*, Oxford University Press.

Prabhu, K.S. *(*2001*): A Study of Two Indian States*, Economic Reforms and Social Sector Development, Sage Publications.

Prabhu, K.S. and Chatterjee,S *(*1993*): Social Sector Expenditures and Human Development: A Study of Indian States*, Department of Economic Analysis and Policy, RBI Dev.

International Labour Office (1984): *Introduction of Social Security*, Geneva.

Guhan, S.*(*1993*):* "Social security for the Poor in the Unorganized Sector: A Blueprint for Inda", in Parikh, K.S. and Sudarshan, R. (eds) : *Human Development and Structural Adjustment* , MacMillan India Ltd., Madras.

Jhabvala, R (ed.) (2001): *The Unorganised Sector*, Sage.

Parikh K.S. and Sudarshan, R.(1993): *Human Development and Structural Adjustment*, MacMillan India Ltd., Madras.

National Human Development Report (2002), Planning Commission. Oxford University Press.

Dreze, J. and A.K. Sen (1989): *Hunger and Public Action*, Oxford Clarendon Press.

Coale A. J. and Hoover, E. M. : *Population Growth and Economic Development In Low Income Countries: A Case study of India's Prospects*, Princeton University Press.

Visaria,L: *Mortality Trends and Health Transition*,.

Krishnaraj, M (ed.): *Gender Population and Development*, Oxford University Press,.

Gulati S. C.: *Fertility in India: An Econometric Study*, Sage.

Agnihotri S. B: *Sex Ratio in Indian Population: A Fresh Exploration*, Sage.

Krishnaji M. ; Sudarshan R.M and Shariff A.: *Gender Population and Development*, Oxford University Press.

Gillis, M, Parkins, D, Roemer, M and Snodgross, D. R. (1996): *Economics of Development*, W.W. Norton and Co.

Sixth all India Education Survey, West Bengal (1999), Volume I , NCERT.

A survey conducted jointly by the Indian Statistical Institute, Calcutta and the SCERT, West Bengal (1995): *Achievement Level of Primary School Children at the End of Class Four.*

Pratichi (India*)* (2002): *The Pratichi Education Report*,Trust V.

Gillis, M, Parkins, D, Roemer, M and Snodgross, D. R. (1996): *Economics of Development*, W.W. Norton and Co.

India Health Report, Oxford.

Health for All, ICSSR, 1998-99.

Duggal, R, Nandraj, S. and Vadair, A. (1995): "Health Expenditure Across States", Parts I & II, in *Economic and Political Weekly*, April 15 & 22.

National family Health Survey, Government of India.

Ellis, F. (1993), *Peasant Economics*, Cambridge University Press. (Chapter 9)

Kabeer, N.(1994): *Reversed Realities: Gender Hierarchies in Development Thought*, Verso.

Kalpagam, U.(1994): *Labour and Gender: Survival in Urban India*, Sage

World Bank Country Study(1991): *Gender and Poverty in India*.

UNDP(2010): *Human Development Report*, Oxford University Press.

Sen, A(2004): "Development as Capability Expansion in Fukuda," Parr,S. and Kumar, S. *Readings in Human Development,* Oxford University Press.

Human Development and Capability Association (www.capabilityapproach.com)

Briefing Note(2009): *Capability and Functionings*: *Definition and Justification.*

ENVIRONMENTAL ECONOMICS (ECNMA302)

Course-3.2

Full Marks: 50[=40(exam)+10(internal assessment)]

(43 Lectures)

1. Environment-Economy Relationship (8 Lectures)

- Environment-economy circular relationship-Laws of Thermodynamics.
- Environmental Kuznets Curve (EKC): Concepts and Genesis. Explanations of inverted-U shaped EKC-empirical evidence- N-shaped EKC.

2. Environmental Pollution as a Public Bad (5 Lectures)

- Environmental Pollution as a Negative Externality (Pigou)
- The issue of Property Rights (Coase)
- Optimal Pollution

3. Pollution Control: Alternative Market Based Instruments (9 Lectures)

- Pure Policies –emission fees, standard setting, tradable pollution permits
- Hybrid Instruments- two-part tariff, double dividend hypothesis, illicit dumping

4. Environmental Valuation (15 Lectures)

- Basic issues of environmental valuation
- Revealed Preference Approach- household production function, travel cost, hedonic price, statistical value of life
- Stated Preference Approach-contingent valuation method

5. Global Issues and the Environment (6 Lectures)

- Trade, Development and Environment-migration of dirty industries, the industrial flight and the pollution haven hypotheses, north-south trade and environment models.
- International/Interregional cooperation-the issue of trans-boundary pollution-International meetings and summits.

References

Books

Pearce,D.W. and Turner,R.K. (1991) : *Economics of Natural Resources and the Environment*, Hemel Hempstead, Harvester-Wheatsheaf.

Baumol, W.J. and Oates W.E.(1988) : *Theory of Environmental Policy*, 2nd Edition, Cambridge University Press.

Bhattacharyya, R.N. (2001) : *Environmental Economics : Indian Perspective*, Oxford University Press.

Hanley,N., Shrogen J.F. and White B. (1997) : *Environmental Economics in Theory and Practice*, Macmillan.

Perman R., Ma Y., McGilvary, J and Common, M (1999) : *Natural Resources and Environmental Economics*, 2nd Edition , Prentice Hall.

Freeman III,A.M.(1999) : *The Measurement of Environmental and Resource Values : Theory and Methods*, Resources for the Future, Washington D.C.

Kolstad, C.D. (2000): *Environmental Economics*, Oxford University Press.

Bromley, D.W. (1995): *Handbook of Environmental Economics*, Blackwell.

Articles

Dinda, S.(2004) : "Environmental Kuznets Curve Hypothesis- A Survey", *Ecological Economics*,49 :431-455.

Munasinghe, M. (1999) : "Is Environmental Degradation an Inevitable Consequence of Economic Growth: Tunneling through the EKC", *Ecological Economics*,29 :89-109.

James, A.J.. and Murty M.N. (1999) : " Water Pollution Abatement: A Taxes-Standard Approach for Indian Industry" in James, A.J. and Murty , M.N. and Misra ,S.(eds) "*Economics of Water Pollution : The Indian Experience*", Oxford University Press.

Fullerton,D. and Kinnaman, T.C.(1995) : "Garbage Recycling and Illicit Burning or Dumping ", *Journal of Environmental Economics and Management*, 29:79-81.

Harrison,D. and D.L. Rubinfeld (1978) : "Hedonic Housing Price and the Demand for Clean Air", *Journal of Environmental Economics and Management*,5: 81-102.

Banerjee, S. (2001) : "Economic Valuation of Environmental Benefits/Costs" in Bhattacharyya R.N. (ed) "*Environmental Economics : Indian Perspective*" ,Oxford University Press.

Chopra, K.(2004) : "The Valuation of Biodiversity :the Case of Keoladeo National Park" in Kadekodi, G.(ed) "*Environmental Economics in Practice: Case Studies from India*", Oxford University Press.

Markandya,A. and Murty, M.N.(2001) ; 'Measuring Non-user Benefit from Cleaning Ganges" in Markandya,A. and Murty, M.N *"Cleaning up the Ganges :A Cost-Benefit Analysis of the Ganga Action Plan,"* Oxford University Press.

Sanyal, K. (2001) : "International Trade and the Environment" in Bhattacharyya R.N. (ed) "*Environmental Economics : Indian Perspective*" ,Oxford University Press.

Chakraborti, P. (2001): "Global Environmental Issues and Initiatives" in Bhattacharyya R.N. (ed) "*Environmental Economics: Indian Perspective*", Oxford University Press.

Chichilinski, G. (1994): "North-South Trade and Global Environment", *American Economic Review*, 84(4):857-875.

RESOURCE ECONOMICS (ECNMA303)

Course-3.3

Full Marks: 50[=40(exam)+10(internal assessment)]

(56 Lectures)

1. Economics of Exhaustible Resources (10 Lectures)

- Optimal extraction of an exhaustible resource
- Dynamic framework with optimal control-competitive and monopolistic mining
- Towards a backstop-exploration and technical progress

2. Economics of Renewable Resources: Fishery (18 Lectures)

- Static model of fishery-logistic specification-the concept of maximum sustainable yield (MSY)-concepts of fish catch, fishing effort and fish stock-Gordon-Schaefer production function. Static optimization under alternative fishery management regimes-open access solutions.
- Dynamic model of fishery-application of control theory-steady-state levels of fish catch, fishing effort and fish stock. Graphical illustration of dynamic model-derivation of the catch locus-open access vs private property solutions.
- Fishery and fish biodiversity. Ecological and economic biodiversity. Biodiversity incorporated in the fishery model.
- Mangrove-fishery linkages. Illustrations from simulation models. Mangrove-fishery linkages in the Indian context
- Basic ideas of the theory of aquaculture shrimp farming.

3. Economics of Renewable Resources : Forestry (10 Lectures)

- The volume function and mean annual increment
- The optimal single rotation
- The Faustmann rotation
- Timber supply
- The optimal stock of old growth forest

4. Irreversibility, Uncertainty and Economic Development (6 Lectures)

- Wilderness development
- Individual decision making in the face of risk
- Option price and option value
- Risk and irreversibility
- Environmental cost-benefit analysis revisited
- Choices under uncertainty
- A safe minimum standard of conservation
- Learning , Bayesian updating and search
- A model of irreversible development

5. Sustainable Development (12 Lectures)

- Concept of sustainable development-alternative definitions-sustainable development rules-indicators of sustainable development-measures of sustainable development
- Sustainable accounting-economics of green accounting and sustainable resource management-net national product and environmentally adjusted net national product. Issues related to environmentally adjusted net national product and sustainable resource management-control theoretic applications-illustrations with various types of non-renewable and renewable resources.
- Poverty and environment-the concept of sustainable livelihood. Poverty, environmental degradation and the economics of common property resources

References

Books

Conrad, J.M. and Clark, C.W (1987): *Natural Resource Economics: Notes and Problems*, Cambridge University Press.

Conrad, J.M.(1999) : *Resource Economics*, Cambridge University Press.

Fisher, A.(1981) : *Resource and Environmental Economics*, Cambridge University Press.

Bhattacharyya, R.N. (2001) : *Environmental Economics : Indian Perspective*, Oxford University Press.

Hanley,N., Shrogen J.F. and White B. (1997) : *Environmental Economics in Theory and Practice*, Macmillan.

Perman R., Ma Y., McGilvary, J and Common, M (1999) : *Natural Resources and Environmental Economics*, 2nd Edition , Prentice Hall.

Bromley, D.W. (1995): *Handbook of Environmental Economics,* Blackwell.

Pearce, D.W. and Turner,R.K. (1991) : *Economics of Natural Resources and the Environment*, Hemel Hempstead, Harvester-Wheatsheaf.

Dasgupta, P. S. and Heal, G.M. (1980) :*Economic Theory and Exhaustible Resources*, Cambridge University Press.

Dasgupta, P. S.(1982) : *The Control of Resources*, Harvard University Press.

Chattopadhyay Gupta, A. (2010) : *Bioeconomic Modelling for Fish Biodiversity and Profitability : An Ecological economic Analysis in Search of a Tradeoff*, LAP LAMBERT Academic Publishing, Berlin.

Articles

Kasulo V. and Perrings, C. (2001): "Fishing down the Value Chain: Modeling the Impact of Biodiversity Loss in Fresh Water Fisheries-the Case of Malwai"-*Mimeographed*, *Environment Department, University of York, UK*.

Kasulo V. and Perrings, C. (2006): "Fishing down the Value Chain: Biodiversity and Access Regimes in Freshwater Fisheries-the Case of Malwai", *Ecological Economics*,59: 106-114

Barbier,E.B. and Strand, I (1998) : "Valuing Mangrove-Fishery Linkages: A Case Study of Campeche,Mexico", *Environmental and Resource Economics,* 12: 151-166.

Gupta,K.(2005) : "Mangrove-Fishery Linkages under Alternative Policy Regimes" in Sengupta, N. and Bandyopadhyay, J. (eds) "*Biodiversity and Quality of Life"* :272-293, Macmillan, New Delhi.

Anderson,J.M. (1985) : "Market Interactions Between Aquaculture and Common Property Commercial Fishery", *Marine Resource Economics*, 2(1) : 1-24.

Montgomery, C. A. and Adams,D.M. (1995): "Optimal Timber Management Policies" in Bromley, D.W. (ed.) *Handbook of Environmental Economics,* Blackwell.

Baland, J.M. and Platteau J.P.(2003) : "Economics of Common Property Management Regimes" in Mäler,K.G. and Vincent,J.R.(eds) *Handbook of Environmental Economics*, vol1, chapter4, North-Holland.

Dasgupta, P. (2005) : "Common Property Resources : Economic Analytics", *Economic and Political Weekly*,40(16):1610-1622.

Common, M.S. and Perrings, C. (1992): "Towards an Ecological Economics of Sustainability", *Ecological Economics,* 6(1):7-34.

ECONOMICS OF FINANCE [ECNMA 304]

Course-3.4

Full Marks:50[=40(exam)+10(internal assessment)]

(56 lectures)

1. Decision –Making under Uncertainty: (9 Lectures)

- Decision Making under Uncertainty :an Alternative Representation
- Decision Making and Expected Utility
- Stochastic Dominance and Attitude towards Risk
- Mean- Variance Analysis: A Special Case of the Expected Utility Approach

2. Symmetric Information: Markets (6 Lectures)

- Portfolio Choice
- The Mean- Variance Approach and Capital Asset-Pricing

3. Systems of Financial Markets (6 Lectures)

- Some Preliminary Considerations and Definitions
- Spot Markets
- Contingent Claims Markets
- Arrow Securities
- Ordinary Securities Markets
- Incomplete Markets

4. Arbitrage and Option Pricing (6 Lectures)

- Arbitrage
- Option Pricing

5. Firms and Financial Markets (8 Lectures)

- Firms and Stock Market Equilibrium
- Separation of Ownership and Control
- The Financial Structure of the Firm

6. Asymmetric Information: Contracts (6 Lectures)

- Debt Contract and Credit Rationing
- Adverse Selection in Insurance Markets
- A Standard Debt Contract
- Credit Rationing

7. Deposit Contracts and Banking (8 Lectures)

- Banks as Deposit –Taking Institutions
- The Optimal Contract
- Problems of Deposit Contracts: Bank Runs
- Adverse Information, Bank Failures and Bank Runs

8. Regulation of Banks (4 Lectures)

- Bank Regulation: The Rationale
- Reserve Requirements
- Suspension of Convertibility
- Deposit Insurance
- Capital Adequacy Requirement

9. Towards Application (3 Lectures)

- Financial Markets and Financial Intermediaries in Theoretical Context
- Financial Markets and Financial Intermediaries in Evolutionary Context

References

Eichberger and Harper (1997),:*Financial Economics*, Oxford University Press

David Blake (2004),:*Financial Market Analysis*,2nd Edition, John Wiley And Sons Ltd.

Stephen F. Leroy and Werner (2001),:*Principles of Financial Economics*, Cambridge University Press.

Hart, O. (1995) : *Firms, Contracts and Financial Structure*, Oxford: Clarendon Press

Bebczuk, R. N. (2003):*Asymmetric Information in Financial Market*

Roy E. Bailey,(2005):*The Economics of Financial Markets*, Cambridge University Press.

Yvan Lengwiler (2004):*Microfoundations of Financial Economics*, Princeton University Press

PLANNING AND DEVELOPMENT WITH REFERENCE TO INDIA

[ECNMA 305]

Course 3.5

Full Marks : 50[=40(exam)+10(internal assessment)]

[56Lectures]

1. **Planning, Economic Growth and Sectoral Performance (5 Lectures)**

   State vs. market, aggregate GDP growth, structural change, manufacturing services growth.

2. **Inclusive Growth: Employment, Poverty and Inequality in India (10 lectures)**

   Measurement issues, Regional and sectoral dimensions in employment, poverty and inequality, Recent debates on poverty and employment during reforms, Issues relating to rural employment, livelihood security and NREGA.

3. **Issues relating to Infrastructure in the Indian economy (10 Lectures)**

Identifying the constraints, Government policies, Case studies of economic impact of selected sectors including roads, energy, railways, ports, irrigation, sanitation and water supply.

4. **Agriculture and Food Security (8 Lectures)**

- Agricultural Growth and Distribution, Agriculture Commodity Markets, Contract Farming, Technology and Agriculture, WTO and Agriculture (10).
- Issues in Food and Nutritional Security

5. **Decentralised Planning and Regional Economic Problems (10 Lectures)**
   - District Development Planning and Performance
   - Issues in Forest Wealth and Tribal Development
   - Watershed Management

References

Ahluwalia, I.J and Little I.M.D. (eds.) (1998): *India's Economic Reforms and Development*, Oxford University Press, New Delhi.

Bardhan, P.K. (1999): *Political Economy of Development in India*, Oxford University Press, New Delhi.

Basu, K.(ed) (2006) : *India's Emerging Economy : Performance and Prospects in the 1990s and Beyond*, 3rd Edition, Oxford University Press, New Delhi.

Chakravarty S. (1987): *Development Planning: The Indian Experience*, Oxford University Press, New Delhi.

Kapila, U. *(*2007a*): Indian Economy- Performance and Policies,* Academic Foundation.

Kapila, U. (2007b): *The Indian Economy since Independence*, 16th Edition,, Academic Foundation.

Kapila, R. and Kapila, U. (2002): *A Decade of Economic Reforms in India*, Academic Foundation.

Parikh, K. (ed) (1999): *India Development Report, 1999-2000*, Oxford University Press, New Delhi.

West Bengal State Planning Board- Human Development Report: Purulia, Bankura, Birbhum, West Midnapur.

Various issues of Economic Survey, Census Report and Statistics for Planning.

Bouma, J., Van Soest, D. and Bulte, E. (2007): "How Sustainable is Participatory Watershed Development in India?", *Agricultural Economics* 36(2007)pp 13-22.

Government of India (2008): *"Common Guidelines for Watershed Development Project"*, Planning Commission

DETAILED SYLLABUS

SEMESTER-IV

CURRENT ISSUES ON GLOBALIZATION WITH SPECIAL REFERENCE TO INDIA (ECNMA 401)

Course-4.1

Full Marks:50[=40(exam)+10(internal assessment)]

(42 Lectures)

1. Introduction to Globalization **(3 Lectures)**

- Justification of liberalization and globalization
- The Dangers of globalization
- Role of the State
- The Indian Economy upto 1991 and beyond.
- Disjunctures in Indian Reform process
- Macroeconomics of Indian Reform Experience

2. Role of State in the Economy in the context of Globalization : Theoretical Issues

(4 Lectures)

- Market failure-causes. Measuring market power
- Public Policy in imperfectly competitive markets
- The natural monopoly case against competition
- Direct price control (Price cap)
- The interconnections problem
- Takeovers in India
- Collusion
- Predatory pricing and strategic entry deterrence
- Franchise and Privatization

3. Role of State in the Economy in the context of Globalization : Indian Experiences

(3 Lectures)

- Public Sector Reforms in India
- Case Study :Information Technology and India's Economic Development during Globalization

4. Multinational Corporations and Foreign Direct Investment (5 Lectures)

- Definition and Importance
- Foreign Direct Investment (FDI)-FDI and multinationals-The debate over multinationals-multinationals and competition effects-impact of capital inflow-FDI in India.
- Portfolio Foreign Investment
- India, the East Asian Crisis and Capital Account Convertibility

5. Free Trade, Protectionism and Regional Trading Blocs (6 Lectures)

- Benefit of Free Trade
- Protectionism and its Tools- Tariff and Non-tariff barriers- Role of GATT
- Regional Trading Blocs (RTBs)-the concept-Free Trade Areas, Customs Union, Common Market and Economic Union-members of RTBs-welfare effects of RTBs.
- Performance of ASEAN and European Union as RTBs.
- RTBs and India.

6. Developing Countries in the New International Economic Order (8 Lectures)

- The World Trade Organization (WTO)-Formation of WTO-objectives and functioning.
- Trade and labour Rights-globalization and low skilled labour
- Patents, and TRIPS
- TRIMS
- Doha, Canacun and after
- India and WTO
- India and patents

7. Globalization and India's Monetary and Fiscal reforms (4 Lectures)

- Monetary and Financial Sector Reforms in India
- India's Fiscal sector Reforms. State-level fiscal reforms in India

8. Globalization, Growth and Poverty (4 Lectures)

- Openness and Growth
- Issues related to growth, globalization and poverty. Policies for Pro-Poor Growth in India-the objective of inclusive growth.
- India's informal economy in the presence of globalization

9. Selected Current issues on Globalization (5 Lectures)

- Globalization and climate change-carbon emissions-deforestation-carbon credits- global carbon credit market-India and the issues related to climate change.
- Recent economic recession and its impact on worldwide employment. Impact of economic recession in India.
- Recent oil price hike and inflationary pressures in the Indian economy.

References

Books

Ahluwalia, I.J and Little I.M.D. (eds.) (1998): *India's Economic Reforms and Development*, Oxford University Press, New Delhi.

Bardhan, P.K. (1999): *Political Economy of Development in India*, Oxford University Press, New Delhi.

Basu, K.(ed) (2006) : *India's Emerging Economy : Performance and Prospects in the 1990s and Beyond*, 3rd Edition, Oxford University Press, New Delhi.

Chakravarty S. (1987): *Development Planning: The Indian Experience*, Oxford University Press, New Delhi.

IGES White paper (2009) : *Climate Change Policies in the Asia-Pacific : Reuniting Climate Change and Sustainable Development*, IGES Publication, Japan.

Government of India: *Economic Survey* (*Annual Issues*) Ministry of Finance, New Delhi.

Jalan, B. (1996): *Indian Economic Policy; Preparing for Twenty First Century, Viking*, New Delhi.

Joshi, V. and Little, I.M.D. (1999): *India*: *Macro Economics and Political Economy*, 1964-1991, Oxford University Press, New Delhi.

Kapila, U. *(*2007a*): Indian Economy- Performance and Policies*, Academic Foundation.

Kapila, U. (2007b): *The Indian Economy since Independence*, 16th Edition,, Academic Foundation.

Kapila, R. and Kapila, U. (2002): *A Decade of Economic Reforms in India*, Academic Foundation.

Parikh, K. (ed) (1999): *India Development Report, 1999-2000*, Oxford University Press, New Delhi.

Sikdar, S.(2006) : *Contemporary Issues in Globalization : An Introduction to Theory and Policy in India*, 2nd Edition, Oxford University Press, New Delhi.

Srinivasan, T.N. and H.B. Chenery (1987): *Handbook of Development Economics: Vol. I &II*, North-Holland Publications, Amsterdam.

Tendulkar, S.D and Bhavani, T.A. (2007): *Understanding Reforms- Post 1991 India*, Oxford University Press, New Delhi.

Articles

Ahluwaliah, M. (2002) : "State level Performance under Economic Reform in India", in Krueger, A.(ed.), *Economic Policy Reforms and the Indian Economy,* University of Chicago Press, Chicago.

Barbara, H-W(2006) : " India's Informal Economy : Facing the Twenty First Century", in Basu, K.(ed.) *India's Emerging Economy : Performance and Prospects in the 1990s and Beyond,* 3rd Edition, Oxford University Press, New Delhi.

Bardhan, P. (2006) : " Disjunctures in the Indian Reform Process : Some Reflections", in Basu, K.(ed) *India's Emerging Economy : Performance and Prospects in the 1990s and Beyond,* 3rd Edition, Oxford University Press, New Delhi.

Ferro, M., Rosenblatt, D. and Stern, N. (2006) : " Policies for Pro-Poor Growth in India", in Basu, K.(ed) *India's Emerging Economy : Performance and Prospects in the 1990s and Beyond,* 3rd Edition, Oxford University Press, New Delhi.

Jha, R. (2000) : "Growth, Inequality and Poverty in India", *Economic and Political Weekly,*11 March.

Kadekodi,G. and Ravindranath,N.H. (1997) : "Macroeconomic Analysis of Forestry Options on Carbon Sequestration in India", *Ecological Economics,* 23: 201-223.

Rakshit,M. (2006) : " Some Macroeconomics of India's Reform Experience", in Basu, K.(ed) *India's Emerging Economy : Performance and Prospects in the 1990s and Beyond,* 3rd Edition, Oxford University Press, New Delhi.

Rao, M.G.(2006):" State-Level Fiscal reforms in India", in Basu, K.(ed) *India's Emerging Economy : Performance and Prospects in the 1990s and Beyond,* 3rd Edition, Oxford University Press, New Delhi.

Reddy, Y.V.(20060 ; " Monetary and Financial Sector Reforms in India: A Practitioner's Perspective", in Basu, K.(ed) *India's Emerging Economy : Performance and Prospects in the 1990s and Beyond,* 3rd Edition, Oxford University Press, New Delhi.

Singh, N. (2006): " Information Technology and India's economic Development", in Basu, K.(ed) *India's Emerging Economy : Performance and Prospects in the 1990s and Beyond,* 3rd Edition, Oxford University Press, New Delhi.

Sundaram, K. and Tendulkar, S. (2003) : " Poverty has Declined in the 1990s",*Economic and Political Weekly*, 25January.

www.nswai.com (2007) : NewsLetter of National Solid waste Association of India for the concept of carbon credit.

[The course instructor may add any other relevant reference as per need of the students in addition to the above-mentioned list]

SPECIAL COURSE-ECONOMETRICS AND STATISTICS

ECONOMETRICS AND STATISTICS-I (ECNMA 402.A)

Course-4.2.A

Full Marks:50[=40(exam)+10(internal assessment)]

(52 Lectures)

Single Equation Econometric System

1. General Linear Regression Model (GLRM) (12 Lectures)

- K-variable GLRM-Assumptions, Estimation, BLUE Properties, Inference Analysis, Applications.
- Tests of linear restrictions
- Pooling of data and Chow Test
- Consequences of Specification Error
- Principal Component Analysis with application
- Sources of Lagged variables. Consequences of applying direct OLS in Distributed Lag Models. Koyck Transformation. Geometric Lag models.
- Estimation and stability of a Dynamic equation. Forecasting using dynamic models.

2. Qualitative Dependent Variable Models (10 Lectures)

- The Linear probability Model(LPM)
- The Logit Model
- The Probit Model
- The Tobit Model
- Theory and Applications

3. Time Series Econometrics (9 Lectures)

- Importance and significance of Time Series Econometrics
- Univariate Time Series Modelling: AR,MA,ARMA, ARIMA
- Yule-Walker Equations, ACF,PACF and Correlogram Analysis

4. Test of Stationarity (6 Lectures)

- Random Walk Model, TSP and DSP
- Integrated Series

- Unit Root, Dickey-Fuller Test and Augmented Dickey-Fuller Test.
- Cointegration-the concept, need and definition.

5. Vector Autorgression and Error Correction Model (5 Lectures)

- Vector Auto-regression (VAR) model: simple and higher order.
- Estimation
- Test of Granger's Causality
- Forecasting and Variance Decomposation

6. Panel Data Regression Model (10 Lectures)

- Panel Data-meaning and advantages.
- Types of Panel Data Models- The Constant Coefficient Model, The Fixed Effects Model (FEM) or Least Squares Dummy Variable (LSDV) Model, The Random Effects Model.
- Estimation
- Hausman Specification Test

References

Johnston, J. (1977 and 1984): *Econometric Methods,* 2nd and 3rd Editions, McGraw Hill.

Johnston,J. and Dinardo,J. (1997) : *Econometric Methods,*4th Edition, McGraw Hill International Edition

Hamilton, J. D. (1994): *Time Series Analysis,* Princeton University Press.

Granger, C.W.J. and Newbold, P.(1977) : *Forecasting Economic Time Series,* 2nd Edition, Academic Press.

Greene, W.H. (1997) : *Econometric Analysis,* 3rd Edition, Prentice Hall.

Gujarati, D.N. (1995): *Basic Econometrics* 4th Edition, McGraw Hill, New Delhi

Enders, W.(2004): *Applied Econometric Time Series,* Wiley.

Maddala, G.S. (1997): *Econometrics,* McGraw Hill, New York.

SPECIAL COURSE-ECONOMETRICS AND STATISTICS

ECONOMETRICS AND STATISTICS-II (ECNMA 403.A)

Course-4.3.A

Full Marks: 50[=40(exam)+10(internal assessment)]

(52 Lectures)

Unit-I(26 Lectures), 25Marks

(Simultaneous Equation System)

1. Forms of Simultaneous Equation System (6 Lectures)

- Structural, Reduced and Final Forms of Simultaneous Equation system with examples.

2. Identification Problem (8 Lectures)

- The concept of identification with economic examples
- Observationally equivalent structure
- Order and Rank Conditions

3. Estimation Problem (12 Lectures)

- Consequences of estimating simultaneous equation system by OLS method
- Unbiasedness and consistency of estimator-use of the concept of plim
- Recursive system
- ILS estimator with properties, IV estimator with properties, 2SLS estimator with properties,LVR estimator with properties,3SLS estimator with properties

Unit-II(26 Lectures), 25Marks

(Applied Econometrics)

1. Demand Analysis (8 Lectures)

- Difference between econometric and economic demand analysis
- Econometric problem in estimating demand function
- Difference between time series and cross section data
- Problems related to pooling of time series and cross section data
- Use of cross section data-Engel curve
- Estimation of demand function of durable consumer goods, non-durable goods and perishable products

2. Production Function Estimation (6 Lectures)

- Problems in estimating Cobb-Douglas production function
- Technical progress and production function-Solow and Wolfson's model
- Difference between CES and VES production function
- Estimation of CES production function

3. Inequality and Poverty (8 Lectures)

- Parametric and non-parametric measures of inequality
- Lorenz curve and Gini coefficient
- Pareto and Log-normal distribution
- Measurement of Poverty and Sen's poverty index

4. Macro-econometric applications (4 Lectures)

- Features and goals of macroeconometric models
- Problem of estimation of saving ratio, capital-output ratio-Kuznets study
- Stages of Development of Macro Model- Indian Macro Models

References

Johnston, J. (1977 and 1984): *Econometric Methods*, 2nd and 3rd Editions, McGraw Hill.

Johnston,J. and Dinardo,J. (1997) : *Econometric Methods*,4th Edition, McGraw Hill International Edition

Gujarati, D.N. (1995): *Basic Econometrics* 4th Edition, McGraw Hill, New Delhi

Maddala, G.S. (1997): *Econometrics*, McGraw Hill, New York.

Desai, M.(1976).: *Applied Econometrics*, P. Allen.

Klein, L.R.(1975) : *A Text Book of Econometrics*: Prentice Hall, New Delhi.

Sen, A. *On Economic Inequality*

Nagar, A. L. and R. K. Das (1993): *Basic Statistics*, Oxford University Press, New Delhi.

Nachane, D.M. (2006): *Econometrics: Theoretical Foundations and Empirical Perspectives*, Oxford University Press.

Intrilligator, M.D. (1978): *Econometric Methods, Techniques and Applications*, Prentice Hall, New Jersey.

Krishna,K.L.(ed) (1999): *Econometric Applications in India*, Oxford University Paerbacks, Oxford University Press, New Delhi.

SPECIAL COURSE-ECONOMETRICS AND STATISTICS

ECONOMETRICS AND STATISTICS-III (ECNMA 404.A)

Course-4.4.A

Full Marks: 50[=40(exam)+10(internal assessment)]

(42 Lectures)

Statistics

1. Probability Theory (10 Lectures)

- Definitions of probability: classical, frequency and axiomatic definitions with limitations.
- Theorems of total probability. Generalized theorem of total probability (Poincare's Theorem)
- Boole's inequality and Bonferroni's inequality: related corollaries
- Conditional probability and statistical independence of two or more events.
- Pairwise and mutual independence of events.
- Theorems on compound probability and independence of events : probability of occurrence of *exactly* m and *at least* m of n events.
- Matching problem
- Exercises for calculating the probabilities of events when the sample space is finite, exercises based on theorems of total probability and compound/conditional probability
- Baye's Theorem: statement , proof and applications

2. Random Variable , Probability Functions and Expectations (3 Lectures)

- Definition of random variables-discrete and continuous
- Probability mass function and probability density function
- Distribution function
- Mathematical expectation-expectation of random variables and moments-theorems on mathematical expectation
- Moment generating function, cumulants, characteristic functions

3. Convergence in probability : Law of Large Numbers (3 Lectures)

- Chebycheff's Lemma and Chebycheff's inequality
- Weak Law of Large Numbers
- Bernoulli's Law of Large Numbers
- Central Limit Theorem

4. Discrete Theoretical Distributions (6 Lectures)

- Binomial, Poisson, Hypergeometric and Negative Binomial Distrbutions.
- Mean, variance, skewness, kurtosis of these distributions with the help of moment generating functions and other methods. Simple problems and applications of these distributions in different fields.

5. Continuous Theoretical Distribution (5 Lectures)

- Rectangular, Normal, Lognormal and Pareto distributions.
- Mean, variance, skewness, kurtosis of these distributions with the help of moment generating functions and other methods. Simple problems and applications of these distributions in different fields.

6. Bivariate Probability Distribution (2Lectures)

- Jointly distributed random variables-marginal distribution.
- Bivariate discrete distribution
- Joint density function
- Bivariate normal distribution :properties and uses

7. Sampling Theory (4 Lectures)

- Revision of Simple random sampling with and without replacement-mean and standard error. Mean and standard error of sample proportion. Stratified random sampling (taught in semester I).
- Other types of sampling: systematic sampling, multistage sampling, purposive and quota sampling, probability proportional to size (pps) sampling.

8. Sampling Distribution (3 Lectures)

- Revision of earlier ideas on four basic distributions: standard normal deviate, chi-square, t and F (taught in semester I).
- Some major results in the context of these distributions
- Uses of above-mentioned distributions in statistical inference

9. Statistical Inference **(6 Lectures)**

- Revision of earlier ideas on estimation theory like point estimation, maximum likelihood estimation and interval estimation (already taught in semester I).
- Revision of earlier ideas on testing of hypothesis like Neyman-Pearson Theory of Testing of Hypothesis – Type I & Type II Errors and Power of Test. Simple Parametric Tests based on τ, t, χ^2 and F Distributions – Small Sample Tests, Large Sample Tests(already taught in semester I).
- Additional things to be taught under testing of hypothesis:
  (a) Test for observed correlation coefficient
  (b) Use of paired t and z-transformation.
  (c) Pearsonian chi-square and test for goodness of fit. Test for independence of attributes- Yate's correction for continuity.

References

Croxton, Crowden and Klein (1988): *Applied General Statistics*, Pitman.

Goon, A.M., Gupta, M. and Dasgupta, B. (2005): *Fundamentals of Statistics Vol. I & II*, World Press, Kolkata.

Nagar, A.L. and R.K. Das (1997): *Basic Statistics* (2e), OUP, ND.

Rao, C.R. (2001): *Linear Statistical Inference and Applications*, Wiley and Sons.

Feller, W. (1968): *An Introduction to Probability Theory and Its Applications*, Vol. I (3e),Wiley.

Hoel, P.G. (1954): *Introduction to Mathematical Statistics* (5e), Wiley and Sons.

Hogg and Craig (1970): *Introduction to Mathematical Statistics* (3e), Macmillan, NY.

Gupta, S.C. and Kapoor ,V.K. (2002) : *Fundamentals of Mathematical Statistics*, Sultan Chand and Sons, New Delhi, 11th edition.

Mood, A.M., Graybill, F.A. and Boes (1974): *Introduction to the Theory of Statistics*, McGraw Hill, Tokyo.

Hoel, Port and Stone (1993): *Introduction to Probability Theory*, Universal Book Stall, New Delhi.

SPECIAL COURSE-ECONOMETRICS AND STATISTICS

ECONOMETRICS AND STATISTICS-IV (ECNMA 405.A)

Course-4.5.A

Full Marks: 50(=30+20)

Project Work

Students will have to prepare a project report using computer softwares related to econometric and statistical packages and secondary data. **The project report will be evaluated by the departmental teachers and 30 marks will be allotted for that. For viva-voce and/or presentation of the project report 20 marks will be allotted. During the viva-voce and/or presentation one external will be present along with the departmental teachers for evaluation.** No supervisor will be allotted for each student. Students will be given a list of topics and the concerned teachers will give some general guidelines. Students will have to prepare the project reports on their own. There should be some demonstration about the use of computer softwares in the computer laboratory.

SPECIAL COURSE-INTERNATIONAL ECONOMICS

INTERNATIONAL ECONOMICS-I (ECNMA 402.B)

Course-4.2.B

Full Marks: 50[=40(exam)+10(internal assessment)]

(41 Lectures)

International Trade Theory and Policy

1. Ricardian Trade Theory (6 Lectures)

- Revision of Ricardian Theory of Comparative Advantage. Generalization of Ricardian Theory
- Ricardian Trade Theory in case of continuum of goods

2. Neo-Classical Orthodox Trade Theory (10 Lectures)

- Revision of general equilibrium trade models
  (a) Jones (1965) model along with its implications.
  (b) Specific factor model of Jones (1971).
  (c) Hybrid models of Jones (1965) and Jones (1971) along with its applications for developing countries.
  (d) General equilibrium trade models with labour market distortions
- Some Refinements of the Orthodox Theory
  (a) Natural Resources, "Dutch Disease" and Deindustrialization
  (b) International Factor Mobility and Trade in Factors
  (c) Directly Unproductive(DUP) Activities and International Trade

3. Trade Policy (10 Lectures)

- Tariff-partial and general equilibrium effects-optimum tariff-tariffs and reciprocal demand curves-the Metzler and Lerner cases.
- Quotas and other non-tariff barriers: quotas, export duties, international cartels, other impediments to free trade.
- Intermediate goods and effective rate of protection.
- Distortions in domestic goods markets
- Distortions in domestic factor markets
- Preferential Trading Cooperation: the various degrees of cooperation, the effects of a Customs Union

- The "New" Protectionism
- Voluntary export restraints and import expansion
- Subsidies
- Administered and Contingent Protection and Fair Trade: dumping and antidumping, countervailing duty, safeguard actions

4. The Precursors to New Trade Theories (5 Lectures)

- Technology Gaps
- The Product Cycle
- Income Effects: Linder's Theory , Baker's Variety Hypothesis
- Intra-Industry Trade: Perfectly Homogeneous Goods and Differentiated Products

5. The New Trade Theories and Strategic Trade Policy (10 Lectures)

- The Neo-Heckscher-Ohlin Trade Theories and Trade Policy
- Monopolistic Competition and International Trade:
  (a) Introduction,
  (b) A Model of Monopolistic Competition: Love for variety and demand, the production side, international trade, tariffs.
- Oligopoly and International Trade
  (a) Homogeneous Goods, Oligopoly and Trade: A Cournot-type model, the equilibrium solution, stability, strategic trade policy-tariffs and subsidies.
  (b) Vertically Differentiated Goods, Oligopoly and International Trade: Consumers, firms and market equilibrium, international trade.
  (c) Horizontal Differentiation, Oligopoly and Trade: Demand for characteristics, the production side, international trade and strategic trade policy.

References

Books

Batra R.N.(1972): *Studies in the Pure Theory of International Trade*, Macmillan

Caves R, Frankel J.A. and Jones R.W.(1990).: *World Trade and Payments*, Boston, Little, Brown and Co.

Chaudhuri, S. and Mukhopadhyay, U (2009): *Revisiting the Informal Sector: A General Equilibrium Approach*, New York, Springer.

Gandolfo, G. (2006) : *International Trade Theory and Policy*, Springer International Edition.

Helpman, P. and Krugman, P.(1985) : *Market Structure and Foreign Trade*, Cambridge, Massachusetts, MIT Press

Helpman, P. and Krugman, P.(1989) : *Trade Policy and Market Structure*, Cambridge, Massachusetts, MIT Press

Jones R.W. (1979): *International Trade: Essays in Theory*, Amsterdam, North Holland

Jones, R.W. (2000): *Globalization and the Theory of Input Trade*, The MIT Press.

Krugman, P.R. (1990): *Rethinking International Trade*, Cambridge, Massachusetts, MIT Press.

Krugman, P.R. (1991): *Geography and Trade*, Cambridge, Massachusetts, MIT Press.

Krugman, P. R. and Obstfeld, M. (1991):*International Economics : Theory and Policy*, 2nd Edn, New York, Harper-Collins.

Marjit, S. (2008): *International Trade and Economic Development: Essays in Theory and Policy*, Oxford University Press, New Delhi.

Articles

Brander, J.A.(1981) : "Intra-industry Trade in Identical Commodities", *Journal of International Economics*,11:1-14.

Bhagwati, J.N. (1982) : "Directly Unproductive, Profit Seeking (DUP) Activities", *Journal of Political Economy*,90 :998-1002. Reprinted in Balsubramanayam (ed), *Essays in Honour of J.N. Bhagwati* :*Writings on International Economics*, Oxford University Press.

Brander, J. and Krugman, ,P. 1983) : "A Reciprocal Dumping Model of International Trade", *Journal of International Economics*,15:313-321.

Brander, J. and Spencer, B.J.(1985):"Export Subsidies and International Market Share Rivalry", *Journal of International Economics*, 18: 83-100.

Corden, W.M. and Findlay, R(1975) : "Urban Unemployment, Intersectoral Capital Mobility and Development Policy", *Economica*, 29: 59- 78.

Dixit, A.K. and Stiglitz, J. (1977): "Monopolistic Competition and Optimum Product Diversity", *American Economic Review*, 67: 297-308.

Dornbusch, R., Fischer, S. and Samuelson, P.A. (1977): "Comparative Advantage , Trade and Payments in a Ricardian Model with Continuum of Goods", *American Economic Review*,67(5) : 823-839.

Gabszewicz, J.J., Shaked, A., Sutton, J. and Thisse, J.F. (1981): "International Trade in Differentiated Products", *International Economic Review*, 22: 527-534.

Harris J.R. and Todaro, M.P. (1970) : " Migration, Unemployment and Development : A Two-Sector Analysis", *American Economic Review*, 60: 126-142.

Helpman, E.(1990) : "Monopolistic Competition in Trade Theory", *Special Paper in International Economics*, Princeton University, International Finance Section.

Jones, R.W. (1965): "The Structure of Simple General Equilibrium Models", *Journal of Political Economy*, 73: 551-572.

Jones, R.W. (1971):" A Three Factor Model in Theory, Trade and History" in Bhagwati, Jones, Mundell and Vanek (eds) *Trade, Balance of Payments and Growth* , North Holland, Chap1 : 3-21.

Krugman, P.R. (1979): "Increasing Returns, Monopolistic Competition and International Trade", *Journal of International Economics*, 9: 469-479.

Krugman, P.R. (1980): "Scale Economies, Product Differentiation and Pattern of Trade", *American Economic Review*, 70:950-959.

Spence, A.M. (1976) :"Product Selection, Fixed Costs and Monopolistic Competition", *Review of Economic Studies*, 43:215-235.

SPECIAL COURSE-INTERNATIONAL ECONOMICS

INTERNATIONAL ECONOMICS-II (ECNMA 403.B)

Course-4.3.B

Full Marks: 50[=40(exam)+10(internal assessment)]

(56 Lectures)

International Finance and Open Economy Macroeconomics

1. The International Financial System (5 Lectures)

- The Foreign Exchange Market
- International Money Markets
- Eurocurrencies and Euromarkets : External Financial Markets

2. Introduction to International Macroeconomics (2 Lectures)

- A Broad Picture of the Open Economy
- National Income Accounting for an Open Economy
- The Balance of Payments accounts

3. Income, Trade and Capital Flows : Fixed and Flexible Exchange Rates (10 Lectures)

- Determination of Output, Employment, and the Trade Balance
- Fixed Exchange Rates and Foreign Exchange Intervention
- Macroeconomic Policy under Floating Exchange Rates
- Expectations, Exchange Rate Dynamics and Economic Policy
- Inflation, Unemployment and Economic Policy in the Open Economy

4. The Monetary Approach to the Balance of Payments (4 Lectures)

- Money, Interest Rates, Price Level and Exchange Rates
- Inflation and Exchange Rate Dynamics

5. Portfolio and Macroeconomic Equilibrium in an Open Economy (8 Lectures)

- Asset Stock Adjustment in a Partial Equilibrium Framework
- Portfolio and Macroeconomic Equilibrium under Fixed Exchange Rates
- Portfolio and Macroeconomic Equilibrium under Flexible Exchange Rates
- Rational Expectation and Overshooting

6. The Intertemporal Approach: (7 Lectures)

- The Intertemporal Approach to the Balance of Payments
- The Intertemporal Approach to the Real Exchange Rate
- An Intertemporal Model with Endogenous Growth in an Open Economy

7. Interdependence in the World Economy (9 Lectures)

- The International Monetary System ; History and Controversies
- International Organisations : The IMF, The World Bank
- International Monetary Integration : Optimum Currency Areas and Monetary Unions

8. Problems of the International Monetary System (11 Lectures)

- Policy Optimisation, Game Theory and International Coordination
  The Problem of the Reference Model and the Obstacles to Coordination
- The Debt Problem
- Capital Movements, Speculation and Currency Crisis
- Proposals for the International Management of Exchange rates.

References

Rivera – Batiz (1989) :*International Finance and Open Economy Macroeconomics*, Macmillan Publishing Company, New York

Giancarlo G. (2000) :*International Finance and Open Economy Macroeconomics*, Springer.

Krugman, P. R. and Obstfeld, M. (1991):*International Economics : Theory and Policy*, 2nd Edn, New York, Harper-Collins.

Levi,M., *International Finance and Open Economy Macroeconomics*,

Caves R, Frankel J.A. and Jones R.W.(1990).: *World Trade and Payments*, Boston, Little, Brown and Co.

Dornbusch, R. (1980) : *Open Economy Macroeconomics*, Basic Books, Inc Publishers, New York.

SPECIAL COURSE-INTERNATIONAL ECONOMICS

INTERNATIONAL ECONOMICS-III(ECNMA 404.B)

Course-4.4.B

Full Marks: 50[=40(exam)+10(internal assessment)]

(38 Lectures)

International Trade and Development

1. Trade Policies and Development (12 Lectures)

- Foreign Capital and Development Issues
- Outsourcing
- Issues of North-South Terms of Trade

2. Trade and inequality (6 Lectures)

- Issues in Regional Inequality
- Trade and Wage Inequality in Developing Countries

3. Trade and Labour (5 Lectures)

- Trade, Wages and Labour Mobility
- Trade Policy Reforms and Informal Sector

4. Trade, Growth and Welfare (7 Lectures)

- Theory of Immiserizing Growth and its applications
- Welfare Implications of Directly Unproductive Profit-Seeking Activities

5. Regional Trade Blocs (8 Lectures)

- Theories of Customs Unions and Free Trade Areas
- Recent Developments of the Institutional Frameworks of the RTBs
- Welfare implications

References

For Trade Policies and Development

Marjit, S. and Beladi H.(1996), 'Protection and the Gainful Effects of Foreign Capital', *Economics Letters*, 53, 3, 311–16.

Chao, C. and. Yu, E. (1994), 'Foreign Capital Inflows and Welfare in an Economy with Imperfect Competition', *Journal of Development Economics*, 45, 1, 141–54

Bhagwati,J., Panagariya,A. and Srinivasan, T. N. (2004), 'The Muddles over Outsourcing', *The Journal of Economic Perspectives*, Vol. 18, No. 4, pp. 93-114.

Sarkar, P (2004), 'Export Diversification, Market Shares and Issues of North-South Terms of Trade' in Bhattacharya, A. and Marjit, S. (Eds.), *Globalization and the Developing Economies: Theory and Evidence*. Manohar Publishers and Distributors, New Delhi, 157-176.

Sikdar, S. (2002), 'Multinational Corporations and Direct Foreign Investment' in *Contemporary Issues in Globalization*. OUP, New Delhi, 79-101.

Feenstra, R. and Hanson, G. (1998), 'Foreign Direct Investment and Relative Wages: Evidence from Mexico's Maquiladoras', *Journal of International Economics*, 42, 3/4, 371–93.

For Trade and inequality

Krugman, P and Liras Elizondo R. (1996), 'Trade Policy and the Third World Metropolis', *Journal of Development Economics*, 49, 137-150.

Marjit, S; Kar , S. and Maiti, D. (2007), 'Regional Trade Openness Index and Income Disparity – A New Methodology and the Indian Experiment', *Economic and Political Weekly*,
March 4, 2007.

Susan C..Z., and Trefler,D. (2005), 'Trade and Inequality in Developing Countries: A General Equilibrium Analysis', *Journal of International Economics*, 65, 21–4.

Feenstra, R.C. and Hanson, G.H. (1996), 'Foreign Investment, Outsourcing, and Relative Wages' in Feenstra, R.C., Grossman, G.M. (Eds.), *The Political Economy of Trade Policy: Papers in Honor of Jagdish Bhagwati*. MIT Press, Cambridge, MA, 89– 127.

For Trade and Labour

Deardorff, A.V. (2000), 'Policy Implications of the Trade and Wage Debate', *Review of International Economics*, 8(3), 478–496.

Marjit, S. and Kar, S. (2004), 'Wages, Labour Mobility, and International Trade' in Bhattacharya, A. and Marjit, S. (Eds.), *Globalization and the Developing Economies: Theory and Evidence*. Manohar Publishers and Distributors, New Delhi, 135-156.

Kar, S.and. Marjit, S. (2001), 'Informal Sector in General Equilibrium: Welfare Effects of Trade Policy Reforms', *International Review of Economics and Finance*, 10(3), 289–300.

For Trade, Growth and Welfare

Bhagawati, J.N. (1973), 'The Theory of Immiserizing Growth: Further Applications', in Feenstra. R.C. (Ed.), *Essays in International Economic Theory*, Vol.1 (1983), MIT Press, Cambridge, 121- 129.

Bhagawati, J.N. (1969), 'Optimal Policies and Immiserizing Growth', in Feenstra. R.C. (Ed.), *Essays in International Economic Theory*, Vol.1 (1983), MIT Press, Cambridge, 130-133.

Bhagawati, J.N. (1982), 'Directly Unproductive Profit-Seeking (DUP) Activities' in Feenstra. R.C. (Ed.), *Essays in International Economic Theory*, Vol.1 (1983), MIT Press, Cambridge, 259-273.

Bhagawati, J.N. and Bent Hansen (1973), 'A Theoretical Analysis of Smuggling' in Feenstra. R.C. (Ed.), *Essays in International Economic Theory*, Vol.1 (1983), MIT Press, Cambridge, 286-301.

For Regional Trade Blocs

Lipsey, R.G. (1960), 'The Theory of Customs Unions: A General Survey', *The Economic Journal*, Vol.70, No. 279, pp. 496-513.

Krauss, M.B. (1972), 'Recent Developments in Customs Union Theory: An Interpretive Survey', *Journal of Economic Literature*, Vol.10, No. 2, pp.413-436.

Panagariya, A. and. Krishna, P. (2002), 'On Necessarily Welfare-Enhancing Free Trade Areas', *Journal of International Economics*, 57, 353-367.

SPECIAL COURSE- INTERNATIONAL ECONOMICS

INTERNATIONAL ECONOMICS -IV (ECNMA 405.B)

Course-4.5.B

Full Marks: 50(=30+20)

Project Work

Students will have to prepare a project report .It can be a theoretical trade model or it can be an empirical work based on secondary data. **The project report will be evaluated by the departmental teachers and 30 marks will be allotted for that. For viva-voce and/or presentation of the project report 20 marks will be allotted. During the viva-voce and/or presentation one external will be present along with the departmental teachers for evaluation.** No supervisor will be allotted for each student. Students will be given a list of topics and the concerned teachers will give some general guidelines. Students will have to prepare the project reports on their own. There can be some demonstration classes about the theoretical trade modeling and/or use of secondary empirical data in the context of international trade. The concerned teacher/teachers can mention in the class some of the sources of these secondary data. The empirical analysis can be done by using computer softwares and if required, the concerned teacher/teachers can demonstrate the use of computer software in the computer laboratory.

SPECIAL COURSE-RURAL ECONOMICS

RURAL ECONOMICS-I (ECNMA 402.C)

Course-4.2.C

Full Marks: 50[=40(exam)+10(internal assessment)]

(40 Lectures)

Theory of Backward Rural Economy

1. Rural Credit Market (10 Lectures)

- Features of rural credit market, Advantages and Limitations of Formal and Informal Credit in India, linkages between land and credit market
- Lender's Risk Hypothesis, Simple models of Credit rationing, Information asymmetry, Monitoring and Collusion.
- Alternative Credit Policies, microfinance, SHGs, Comparison between Bangladesh and Indian models.

2. Rural-Urban Migration (6 Lectures)

- Harris-Todaro Model on migration, Extensions of H-T, Discussion on Alternative Policies, reasons and impact of migration;
- Empirical Evidence on rural migration in India: Rural-rural and rural-urban case-studies from West Bengal

3. Food Production, Starvation and Famine Debate (10 Lectures)

- Food Availability, Supply and Demand, Role of Technology in Production and Theory of Exchange Entitlement
- Sen's Reading of The Bengal Famine 1942-43, the cases of Bangladesh, Ethiopia, China; Slump and Boom Famines.

4. Reforms in Agricultural Sector (8 Lectures)

- Subsidy in Agriculture, measurement and definition; Domestic support and Cross-country perspective; Subsidy in Indian agriculture,
- Role of MNCs in Indian agriculture, Debt-trap and suicide of farmers – the case of Maharashtra, Karnataka and Andhra Pradesh.

5. Rural Non-farm Employment (6 Lectures)

- Trends and Pattern of rural non-farm employment in India; Linkages between farm and non-farm sectors; Job opportunities, accumulation and employment.

References

Ray, D. *Development Economics,* Oxford University Press, chapters 10, 14,

Sen, A. *Poverty and Famines, ,* chapters 1, 5, 6, and 10.

Gulati and Narayan : *The Subsidy Syndrome in Indian Agriculture,* Oxford University Press, Chapters: introduction, 1 and 2.

Articles from various issues of *Economic and Political Weekly*

Basu, K. (1984) : *The Less Developed Economy,* Oxford University Press.

Harris J.R. and Todaro, M.P. (1970) : " Migration, Unemployment and Development : A Two- Sector Analysis", *American Economic Review,* 60: 126-142.

Corden, W.M. and Findlay, R (1975) : "Urban Unemployment, Intersectoral Capital Mobility and Development Policy", *Economica,* 29: 59- 78.

Harper, M.(ed) (2003): *Microfinance: Evolution, Achievements and Challenges ,* I.T.D.G. Publishing Company.

Fisher, T and Sri Ram (2003): *Beyond Microcredit: Putting Development Back into Microfinance,* Sage Publishing Company.

Articles on Microfinance from *Journal of Development Economics,*1999, vol60.

Visaria, P. and Basant, R. (ed.) (1994): *Non-Agricultural Employment in India: Trends and Prospects,* Sage Publications, New Delhi.

Basant, R,. (1998) : "Economic Diversification in Rural Areas: An Overview" in Basant, R., Kumar, B.L. and Parthasarathy,R. (eds) *Non-Agricltural Employment in Rural India,* Rawat Publishers.

SPECIAL COURSE-RURAL ECONOMICS

RURAL ECONOMICS-II (ECNMA 403.C)

Course-4.3.C

Full Marks: 50[=40(exam)+10(internal assessment)]

(50 Lectures)

Theory and Practice of Rural Development

1. Concept of Poverty (6 Lectures)

- Mainstream Neo-Classical versus Radical Marxist approach.
- Multidimensional nature of Rural Poverty – Clusters of disadvantages and the 'Deprivation Trap'.
- Sen's concept of poverty and deprivation.

2. Agrarian Structure and Rural Poverty (4 Lectures)

- Mechanisms through which regressive features of the agrarian economy keep the mass of the rural population in perpetual poverty.

3. Integrated Rural Development(IRD) (6 Lectures)

- Conceptual framework
- Typology of IRD
- Alternative models of IRD.

4. Decentralisation and Rural Poverty Alleviation (4 Lectures)

- Liberal Interventionist approach
- Radical approach.

5. Panchayati Raj in India(PRI) (8 Lectures)

- Evolution of Panchayati Raj—73rd Constitutional Amendment Act—present status of implementation—factors explaining the relatively poor performance of panchayats in most states—Accountability framework for panchayats.
- Panchayati Raj in West Bengal : Structure of PRI in WB—Devolution of Functions, Functionaries and Finance—Issues in Panchayat Finance—Evaluation of PRI in WB.

6. Centrally Sponsored Schemes (CSS) for Rural Development in India (6 Lectures)

- CSS for Rural Development in India **(**with special reference to SGSY and NREGP)
- Shortcomings in the execution of CSS.
- Reasons for poor implementation of CSSs.

7. Role of NGOs in Rural Development (6 Lectures)

- Conceptual issues.
- Accountability of NGOs.

8. Identification of Households below the Poverty Line (4 Lectures)

- Critical evaluation of the BPL Census, 1997 and 2002.
- Methodology of BPL Census, 2009.

9. Rural Development Project Implementation, Monitoring and Evaluation (4 Lectures)

- Criteria and Methodology – PRA, PLA and RRA techniques.

References

Joshi, P.C. (1979): 'Perspectives on Poverty and Social Change : Emergence of the Poor as a Class' , *Economic and Political Weekly,* Annual No. ,February.

Chambers, R.(1983) :*Rural Development : Putting the last first,* Longman.

Shergill, H.S(1989).: 'Agrarian Structure as a Factor in Rural Poverty', *Economic and Political Weekly,* March 25.

Hye, H. A.(1986): *Integrated Approaches to Rural Development,* Sterling Publishers.

Govt. of India(2008):, *Ministry of Panchayati Raj- The State of the Panchayats 2007-08.*

Govt. of India(2006):*Report of the Expert Group: Planning at the Grassroots Level,* Ministry of Panchayati Raj, Govt of India.

Govt. of India(2007) :*Second Administrative Commission : Sixth Report : Local Governance,*

Mukarji, N. and .Bandyopadhyay, D. (1993): *New Horizons for West Bengal's Panchayats,* Dept. of Panchayats & Rural Development, Govt. of W.B.

Bhaumik, A. K.(2001) : *Political Economy of Panchayat Finance in West Bengal.*

Saxena, N.C.:'*Poverty Alleviation During the 10th Plan- Policy Issues',* Planning Commission, Govt. of India.

Articles on NGOs by 1. Damodar Sura & et al(2006), and 2. Mokbul Morshed Ahmad (2006) in M.C.Behera (ed)- *Globalising Rural Development,* Sage.

Sundaram, K.(2002): 'On Identification of Households below Poverty Line in BPL Census 2002:Some Comments on the Proposed Methodology', *Economic and Political Weekly*, March.

Hirway, I. (2003): 'Identification of BPL Households for Poverty Alleviation Programmes', *Economic and Political Weekly*, November 8.

Govt. of India (2009): *Report of the Expert Group on the Methodology for Conducting the BPL Census for 11th Five Year Plan*, Ministry of Rural Development,August.

Kumar, S. (2002) : *Methods for Community Participation : A Complete Guide for Practioners,* Vistar Publications.

Mukherjee, N.(2002): *Participatory Learning and Action,* Concept Publishers.

Bhaumik,A.K.(2007) :'Project Implementation: As Practised and as Desired', *Rabindra Bharati University Journal of Economics*, Vol. I.

SPECIAL COURSE-RURAL ECONOMICS

RURAL ECONOMICS-III (ECNMA 404.C)

Course-4.4.C

Full Marks: 50[=40(exam)+10(internal assessment)]

(38 Lectures)

Agricultural Economics

1. Ownership Cultivation and different tenurial contracts (8 Lectures)

- Efficiency of different tenurial contracts vis-à-vis ownership cultivation.
- Uncertainty and share tenancy.
- Coexistence of Share Tenancy, Fixed Rent Tenancy and Wage Contract in Indian Agriculture – Some explanations.
- Factors determining the leasing decision – factor market imperfections.

2. Rural Credit Market and different types of Inter linkage. (15 Lectures)

- Characteristics of rural credit market.
- Different explanations for high interest rate in informal credit market – Underpricing of Collateral – delay in disbursement of formal credit.
- Credit-Product Interlinkage – ICPC vs. NICPC – Price uncertainty.
- Credit-Labour Interlinkage – Potential Risk, Bardhan Model, Basu's model – interlinkage in risk less world, M.R. Gupta model.
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3. Credit Share-Cropping Interlinkage and problem of innovation. (5 Lectures)

- Agricultural Stagnation – Semi feudal character - Bhaduri model.
- Price Uncertainty, Crop failure and crop insurance Scheme.

4. Sectoral Growth Linkage between Agriculture and the Rural Nonfarm Economy.

(5 Lectures)

- Consumption Linkage
- Factor market Linkage
- Productivity Linkage
- Reverse Linkage
- Cross- section Evidence of Linkage
- Time-series Evidence of Linkage.

- Linkage Debates.

5. Food Industry Consolidation and Agro-industrialization (5 Lectures)

- Concentration Downstream in the 'Agrifood' system.
- Globalization and three waves of consolidation.
- Rural Processing and impact on the RNFE : Emerging Evidence

References

Bardhan P. (1980), 'Interlocking Factor Markets and Agrarian Development: A Review of Issues', *Oxford Economic Papers,* 32(1).

Bardhan P. (1984), *Land Labour and Rural Poverty : Essays in Economic Development* , Oxford University Press.

Basu, K. (1984):*The Less Developed Economy*: *A Critique of Contemporary Theory,* Oxford University Press.

Bhadhuri, A. (1973): "A Study in Agricultural Backwardness under Semi-feudalism", *Economic Journal,* 83: 120-137.

Chadha, G. K. (1993): "Nonfarm Employment for Rural Households in India : Evidence and Prognosis ," *The Indian Journal of Labour Economics,* 36(3): 296-327.

Chaudhuri, S. (1996), 'Credit Product Interlinkage : Different Explanation' *The Indian Journal of Economics,* 77(305).

Chaudhuri, S. (1996):'Price Uncertainty and Credit-Product Interlinkage – A Note' *Keio Economic Studies,* 33(2): 102-115.

Chadhuri, S. (2004) : *Some Aspects of Agricultural Credit in a Developing Economy,* Serials Publication, New Delhi.

Ellis, F. (1993), *Peasant Economics*, Cambridge University Press.

Gupta M. R. (1990), 'Production Uncertainty, Lenders' Risk and Landlord's incentive to innovate in an interlinked Credit Share Cropping Contract', *Journal of Quantitative Economics,* 6(1):11-18

Haggblade S., Hazell, B. R. and Reardon, T. (2007), '*Transforming the Rural Nonfarm Economy'*, The John Hopkins University Press.

Rakshit, M. (1982): *The Labour Surplus Economy,* Macmillan, New Delhi and Humanities Press, New Jersey.

SPECIAL COURSE- RURAL ECONOMICS

RURAL ECONOMICS -IV (ECNMA 405.C)

Course-4.5.C

Full Marks: 50(=30+20)

Project Work

Students will have to prepare a project report .It can be an empirical work based on either field survey data or secondary data. **The project report will be evaluated by the departmental teachers and 30 marks will be allotted for that. For viva-voce and/or presentation of the project report 20 marks will be allotted. During the viva-voce and/or presentation one external will be present along with the departmental teachers for evaluation.** No supervisor will be allotted for each student. Students will be given a list of topics and the concerned teachers will give some general guidelines. Students will have to prepare the project reports on their own. There can be some demonstration classes about the use of field survey data or secondary data in the context of rural economics. The concerned teacher/teachers can mention in the class some of the sources of these secondary data. In case of field survey , the concerned teacher/teachers can give a guideline for the questionnaire and can administer the field survey to be done by the students.