

RAIGANJ UNIVERSITY

ACADEMIC SESSION 2017-18

ECONOMICS

POST-GRADUATE SYLLABUS

UNDER CHOICE BASED CREDIT SYSTEM

DEPARTMENT OF ECONOMICS

RAIGANJ UNIVERSITY

RAIGANJ, UTTAR DINAJPUR-733134

West Bengal, India

COURSE STRUCTURE

Distribution of Credits

Semester	Written Examinations	Internal Assessment	Semester Total
I	75%	25%	32 (400 marks)
II	75%	25%	32(400 marks)
III	75%	25%	32(400 marks)
IV	75%	25%	32(400 marks)
Total			128(1600 marks)

SEMESTER - I

Compulsory Courses		
Course No.	Course Name	Credits
101	Microeconomic Analysis-I	4 Credits (50 marks)
102	Macroeconomic Analysis –I	4 Credits (50 marks)
103	Mathematical Methods in Economics -I	4 Credits (50 marks)
104	Statistical Methods for Economics	4 Credits (50 marks)
105	Public Economics-I	4 Credits (50 marks)
106	Indian Economic Problems & Policy	4 Credits (50 marks)
107	General Economics (IDC-1)*	8 Credits (100 marks)
Total		32 (400 marks)

SEMESTER - II

Compulsory Courses		
Course No.	Course Name	Credits
201	Microeconomic Analysis-II	4 Credits (50 marks)
202	Macroeconomic Analysis –II	4 Credits (50 marks)
203	Mathematical Methods in Economics -II	4 Credits (50 marks)
204	Introductory Econometrics	4 Credits (50 marks)
205	Public Economics-II	4 Credits (50 marks)
206	Research Methods in Economics	4 Credits (50 marks)
207	Basis Statistics (IDC-2)*	8 Credits (100 marks)
Total		32(400 marks)

** IDC-I & IDC-II will be taught to the students of other departments only.*

SEMESTER - III

Compulsory Courses		
Course No.	Course Name	Credits
301	International Economics –I	4 Credits (50 marks)
302	Economics of Growth & Development –I	4 Credits (50 marks)
Optional Courses		
<i>(Each student shall opt for four Courses out of the following Courses)</i>		
303	Agricultural Economics – I	4 Credits (50 marks)
304	Advanced International Economics-I	4 Credits (50 marks)
305	Econometrics with Computer Applications – I	4 Credits (50 marks)
306	Demography and Human Population Studies – I	4 Credits (50 marks)
307	Economics of Gender and Development-I	4 Credits (50 marks)
Internal Assessment		
308	Field Survey & Report Writing	4 Credits (50 marks)
309	Seminar	4 Credits (50 marks)
Total		32 (400 marks)

SEMESTER - IV

Compulsory Courses		
Course No.	Course Name	Credits
401	International Economics –II	4 Credits (50 marks)
402	Economics of Growth & Development –II	4 Credits (50 marks)
Optional Courses		
<i>(To be continued as in 3rd Semester)</i>		
403	Agricultural Economics – II	4 Credits (50 marks)
404	Advanced International Economics-II	4 Credits (50 marks)
405	Econometrics with Computer Applications – II	4 Credits (50 marks)
406	Demography and Human Population Studies-II	4 Credits (50 marks)
407	Economics of Gender & Development- II	4 Credits (50 marks)
Internal Assessment		
408	Dissertation & Viva-Voce	6 + 2= 8 Credits (100)
Total		32 (400 marks)

SEMESTER - I

Course No: 101

Microeconomic Analysis-I

4 Credits

Module 1: Consumer Choice and Advanced Utility Theory

Decision Making under Certainty- Preference Orderings, Hicks-Allen preference theory- Applications of Indifference curves, Consumer's Surplus. Indirect utility function; Linear Expenditure System and Duality. Revealed preference theory.

Module 2: Uncertainty and Missing Markets

Decision Making under Uncertainty - Expected Utility Theorem, Measures of Risk Aversion. Market Failure - Externalities, Commons and Public Goods, Asymmetric Information, Contracts and Moral Hazards.

Module 3: Theory of Production and Costs:

Production function - Isoquants -Least cost combination of inputs; Homogeneous and non homogeneous production function- Technical progress and production function-Cobb Douglas and CES Production function and their properties – Constrained optimization of a producer; Expansion path; Input demand functions - Analysis of joint profit maximization and multi-product firm; Producer's surplus; Production possibility curve.

Modern Theory of Cost -Simple derivation of short and long run cost functions from production functions-multiproduct firms and dynamic changes in costs.

References:

1. Akerlof, George A. (1970): "The Market for Lemons: Quality Uncertainty and the Market Mechanism", *Quarterly Journal of Economics* 84 (3), August 1970: 488-500.
2. Chipman, J. and J. Moore (1980): "Compensating Variation, Consumer Surplus and Welfare", *American Economic Review* 70: 933-48.
3. Cowell, F. (2006), *Microeconomics*, Oxford University Press.
4. Dixit, Avinash K. and Robert S. Pindyck (1994): *Investment under Uncertainty*, Princeton, N.J., Princeton University Press.

5. Gauld, J.P. and Edward P. L. (1996), *Microeconomic Theory*, Richard. Irwin, Homewood.
6. Gravelle, H. & R. Rees (1981): *Microeconomics*, Longman, London.
7. Green, H. and V. Walsh (1975): *Classical and Neo-classical Theories of General Equilibrium*, OUP, London.
8. Henderson J. and R.E. Quandt (1980), *Microeconomic Theory: A Mathematical Approach*, McGraw Hill, New Delhi.
9. Hicks, J. (1939): *Value and Capital*, Clarendon Press, Oxford.
10. Jeffrey, M. Perloff (1999): *Microeconomics*, Addison-Wesley.
11. Koutsoyiannis, A. (1979), *Modern Microeconomics*, (2nd Edition), Macmillan Press, London.
12. Mansfield, E. (1997): *Microeconomics* (9th Edition), W.W. Norton and Company, New York.
13. Marshall, A. (1920): *Principles of Economics*, Macmillan, London.
14. Mas-Collel, Andreu, Michael D. Whinston and Jenry R Green (2007): *Microeconomic Theory*, OUP, New Delhi.
15. N. Gregory Mankiw: *Principles of Microeconomics*, Thomson India.
16. Neumann, John von and Oscar Morgenstern (1944): *Theory of Games and Economic Behaviour*, Princeton, N.J., Princeton University Press.
17. Pindyck, Robert S. and Daniel L. Rubinfeld (2003): *Microeconomics* (5th Edition), Pearson Education, New Delhi.
18. R.S Pindyck, R.S, D.L.Rubinfeld & P.L.Mehta (2000): *Microeconomics*, 3rd edition; Prentice-Hall India.
19. Salvatore, Dominick (2002): *Microeconomic Theory and Applications*, Oxford University Press.
20. Sen, Anindya (1999), *Microeconomics: Theory and Applications*, Oxford University Press, New Delhi.
21. Spence (1974): *Market Signaling*, Cambridge, Harvard University Press.
22. Stigler, G. (1996), *Theory of Price*, (4th Edition), Prentice Hall of India, New Delhi.
23. Varian, Hal R. (2000): *Microeconomic Analysis*, W.W. Norton, New York.

Module 1: The Keynesian System:

The role of aggregate demand-money, interest, income-factors affecting equilibrium income and the interest rate-monetary influences and real influences--relative effectiveness of monetary and fiscal policy-the Keynesian contractual view of the labor market-sources of wage rigidity-the aggregate supply schedule-effects of shifts in the aggregate supply function-wage rigidity vs. sticky wages-fiscal and monetary expansion with sticky wages-supply shocks and aggregate demand policy.

Module 2: Output, Inflation and Unemployment:

Monetarist vs. Keynesian Views Friedman's restatement of the quantity theory-the natural rate theory-the Keynesian view of the output-inflation trade-off-monetarist policy prescriptions-monetarist vs. Keynesian theories of aggregate demand-monetarist vs. Keynesian theories of aggregate supply-some evidence on the monetarist- Keynesian controversy.

Module 3: Disequilibrium Macroeconomics:

Patinkin's neoclassical synthesis-non-compatibility of orthodox microeconomic theory and Keynesian macroeconomics-Walras' law- micro foundations of macroeconomics-notional and effective demand functions-dual decision hypothesis of Clower-traditional preference theory as a special case of the dual decision theory-concept of constrained demand-a general disequilibrium model involving both excess supply and excess demand situations-concepts of effective supply and forced saving.

References:

1. Dornbusch, R. And S. Fisher: Macroeconomics (3/e)
2. Abel, A.B. And B.S. Bernake: Macroeconomics (4/e)
3. Froyen, R.T-Macroeconomics: Theories and Policies (4/e)
4. Friedman, M.(1968):'The Role of Monetary Policy' *In American Economic Review*,Vol.58, No.01

5. Modigliani, F. (1977): 'The Monetarist Controversy or, Should We Forsake Stabilization Policies' In *AER*.
6. Patinkin, D. (1965): *Money, Interest and Prices*.
7. Clower, R. W. (ed.) (1970) : *The Keynesian Counter Revolution : A Theoretical Appraisal*.
8. Barro, R.J. And H.I Grossman (1971): 'A General Disequilibrium Model of Income and Employment', *AER*.

Course No: 103 Mathematical Methods in Economics -I 4 Credits

Module1. Optimization:

Static optimization: Global/Local; Unconstrained Optimization - first and second derivative, Constrained multivariate optimization, Lagrange Multiplier method; Applications.

Module2. Linear programming and Input-output Model

Standard and canonical form of LP Problem; theory of simplex method; Simplex Algorithm- maximization and Minimization case; extreme point theorem, shadow prices, exceptional cases in LP solution; duality theorems; Primal-Dual relationship; economic interpretation of duality.

Module 3. Input-Output Model:

Basic concepts of input-output model, essential features of input-output model, assumptions of input-output model, open and closed model, Leontief input-output model, Hawkins-Simon Condition, Samuelson Substitution Theorem, linear programming formulation.

References:

1. Dixit, A.K (1990): *Optimization in Economic Theory*, Oxford University Press.
2. Chiang and Wainwright (2005): *Fundamental Methods of Mathematical Economics*, McGraw-hill.
3. Chiang, A.C (1992): *Dynamic Optimization*, McGraw-Hill.

4. Silberberg, E. (1990): *The Structure of Economics: A Mathematical Analysis*, McGraw-Hill.
5. Hadley, R. (1960): *Linear Algebra*, Addison-Wesley.
6. Sundaram, R.K. (1996): *A First Course in Optimization Theory*, Cambridge University Press.
7. Osborne, M.J. (2004): *An Introduction to Game Theory*, Oxford University Press.
8. Aliprantis, C.D. and S.K. Chakrabarti (1999): *Games and Decision Making*, Oxford University Press.
9. Fudenberg, D. and Tirole, J. (1991): *Game Theory*, MIT Press.
10. Oz Shy (1997): *Industrial Organization-Theory and Applications*, MIT Press.

Course No: 104

Statistical Methods for Economics

4 Credits

Module 1: Random Variables and Probability Distributions:

Random variables, Density function, Joint Density Function, Expectation and Variance of Random Variables.

Discrete Distributions: Properties (Mean and Variance) of Binomial, Poisson - their applications Continuous Distributions: Properties (Mean and Variance) Uniform, Normal and Exponential- their applications, Normal Distribution as limiting forms of Binomial Distributions; Importance of the Normal Distribution in Statistics

Module 2: Sampling Theory and Sampling Distributions:

Sampling Techniques; Random Sampling; Sampling Distribution of an Estimator Sampling distributions – standard error and its uses – Distribution of sample mean, chi-square, t, F distributions – uses of these sampling distributions.

Module 3: Estimation:

Parameter estimation – point and interval estimation; Properties of estimators; Methods of estimation: least square method, method of moments and maximum likelihood.

Module 4: Tests of Significance:

Simple and composite hypothesis - null and alternative hypothesis - Type I and Type II errors, significance level and power, concept of P value in testing, parametric and nonparametric methods of testing.

References:

1. Lind A Douglas, Marchal G William and Wathen A Samuel: Basic Statistics for Business and Economics, 5th Edition, McGraw Hill International Edn
2. Mendenhall William., Beaver J Robert and Beaver M Barbara: Introduction to Probability and Statistics, 12th Edition, Thomson Brooks/Cole Publishers
3. Gupta S C and Kapoor V K: Fundamentals of Mathematical Statistics, 11th Edition, Sulthan Chand and sons, New Delhi
4. Ross S: A first course in Probability, 3rd edition, Mac Millan New York 1985
5. Hamilton, Lawrence C. (1990) Modern Data Analysis: A First Course in Applied Statistics, Brooks/Cole, California.
6. Marsh, Catherine (2009) Exploring Data: An Introduction to Data Analysis for Social Scientists, Polity Press, UK, Second Edition
7. De Groot, Morris H. and Schervish, Mark J.: Probability and Statistics
8. R.V. Hogg. and A.T. Craig , An Introduction to Mathematical Statistics, Third Edition, Amerind, New York, London
9. Richard J. Larsen and Morris L. Marx, an Introduction to Mathematical Statistics and its Applications, Prentice Hall, 2011.
10. John E. Freund, Mathematical Statistics, Prentice Hall, 1992.

Course No: 105

Public Economics-I

4 Credits

Module 1. Theory of Government Intervention:

Definition and Scope of Public Economics Economic Rationale of the Modern Government. Theory of Public Goods, Efficiency condition for public goods. Market Efficiency, Market Failure and Government intervention, Efficiency and Equity

Module 2. Externalities and the Government Policy:

Consumption, Production and Technological Externalities. Direct Negotiation versus Governmental Intervention. Negative externalities and Spillover Effects. Public Pricing and Environmental Policy. Coase Theorem

Module 3. Evaluation of Public Investment Projects and Decision Making in Public Sector:

Cost-Benefit Analysis and Government Investments: Private cost benefit analysis, Social cost benefit analysis, Consumer surplus and the decision to undertake a project, Measuring non-monetized costs and benefits. Shadow prices and Market Prices, The discount rate for social cost-benefit analysis. The evaluation of risk. Distributional consideration, Cost effectiveness. Govt. subsidies and income support for the poor. Social Security and Social insurance, Government and Health care, Education, Welfare program and redistribution of income.

Module 4. The Tax System:

Introduction to Taxation. Concepts – Tax Ratio, Buoyancy and Elasticity of Taxation, Rate Schedules of Taxation, Tax Credit, Exemption and Deduction - Excess Burden of Tax, and Taxable Capacity. Tax Equity and Efficiency. Tax incidence. Excess Burden.

Optimal Theory of Taxation. Taxation, Prices, Efficiency, and the Distribution of Income

Module 5. Public Expenditure Theory :

The Growth of Government since 1870 – An International Perspective. Causes of the Growth of Public Expenditure in Modern Times. Macro models of public Expenditure. A Microeconomic Model of Public Expenditure. Micro determinants of Public expenditure: population growth, increase in the price of public sector inputs, deterioration of service environment

Module 6. Theory of Fiscal Federalism:

Theory of Fiscal Federalism: The Decentralization Theorem. Fiscal Federalism: An Economic Approach. Economic Efficiency Issues in Multilevel Government. Assignment Issues in Multilevel Government. Theory of Intergovernmental Transfers

References:

1. Feldstein, Martin (2001): *The Transformation of Public Economics Research: 1970-2000*. NBER website.
2. Laffont, Jean-Jacques (1989): *Fundamentals of Public Economics*, Boston, MIT.
3. Rosen, Harvey S. and Ted Gayer (2007): *Public Finance*, (8/e), McGraw-Hill Irwin. Chap 4.
4. Due, John F. and Ann F. Friedlander (PB Indian edition 1997): *Government Finance: Economics of the Public Sector*, AITBS Publishers & Distributors (Regd), Delhi. Chap 3, pp.25-62.
5. Myles, Gareth (1999): *Public Economics*, Cambridge. Chaps 1 and 2.
6. Basu, Kaushik (1991): "Markets, Power and Social Norms" in *Economic Graffiti: Essays for Everyone*, Bombay, Oxford.
7. Wittman, Donald (1989): "Why Democracies Produce Efficient Results" in *Journal of Political Economy*, 97 (6).
8. Brown, C. V. and P. M. Jackson (1982): *Public Sector Economics*, Martin Robertson, Oxford. Chap 2. [4/e, Blackwell, 1996]
9. Rosen, Harvey S. and Ted Gayer (2007): *Public Finance*, (8/e), McGraw-Hill Irwin. Chap 5.
10. Due, John F. and Ann F. Friedlander (PB Indian edition 1997): *Government Finance: Economics of the Public Sector*, AITBS Publishers & Distributors (Regd.), Delhi. Chap 4, pp.63-84.
11. Coase, R. H. (1960): "The Problem of social Costs", *Journal of Law and Economics*, vol. 3, October, pp. 1-44
12. Stigliz J. E (2000) *Economics of the Public Sector*, Third Edition. W.W Norton and Company, New Delhi
13. Hyman D.N (2010): *Public Finance, A Contemporary Application of Theory to Policy*, 10th Edition. South Western, Cengage learning. USA
14. Aronson, J. Richard (1985): *Public Finance*, McGraw-Hill Book Company. Chap 10

15. Arrow, K. (1963): *Social Choice and Individual Values* (2/e):New Haven: Yale
16. Brown, C. V. and P. M. Jackson (1982): *Public Sector Economics*, Martin Robertson, Oxford. Chap 4. [4/e, Blackwell, 1996]
17. Cullis, John and Philip Jones (1998, 2/e): *Public Finance and Public Choice*, Oxford University Press. Chaps 1, 4, 11 and 16.
18. Laffont, Jean-Jacques (1989): *Fundamentals of Public Economics*, Boston, MIT. Chap 4.
19. Mueller, D. C. (1979): *Public Choice*, Cambridge University Press, Cambridge.
20. Ordeshook, Peter (1986): *Game Theory and Political Theory*, Cambridge. Chap2, section 1.
21. Rawls, John (2001): *Justice as Fairness: A Restatement*, Harvard, Cambridge.
22. Saari, Donald (1998): "Connecting and Resolving Sen's and Arrow's Theorems". *Social Choice and Welfare*, 15, 239-261.
23. Sen, Amartya (1979): "Personal Utilities and Public Judgments: Or What's Wrong with Welfare Economics?" *Economic Journal*, 89 (Sept), pp.537-558.
24. Sen, Amartya (1999): "On the Possibility of Social Choice", *American Economic Review*, Vol. 89 (3), 349-378.
25. Shepsle, Kenneth and Mark Boncheck (1997): *Analyzing Politics: rationality, Behaviour and Institutions*, Norton, New York. Chap 4.
26. Stiglitz (1986): *Economics of Public Sector*, Norton, New York.
27. Jha, Raghendra (1987): *Modern Public Economics*, Routledge, London.
28. Musgrave, Richard A. and Peggy B. Musgrave (1989): *Public Finance in Theory and Practice*, McGraw-Hill Book Company.
29. Brown, C. V. and P. M. Jackson (1982): *Public Sector Economics*, Martin Robertson, Oxford. Chap 4. [4/e, Blackwell, 1996]
30. Tanzi, Vito and Ludger Schuknecht (2000): *Public Spending in the 20th Century: A Global Perspective*, Cambridge University Press. Chap I, pp.3-22.
31. Aronson, J. Richard (1985): *Public Finance*, McGraw-Hill BookCompany,Chap 6
32. Oates,Wallace(1972):*Fiscal Federalism*,Harcourt Brace and Johanowich, New York.
33. Musgrave, R. A. (1977): *Essays in Fiscal Federalism*, Greenwood West Port.
34. Srivastava, D. K. (ed.) (2000): *Fiscal Federalism in India*, Har-Anand Publications Ltd., New Delhi.
35. Chelliah, Raja J. et al (1981): *Trends and Issues in India's Federal Finance*, National Institute of Public Finance and Policy, New Delhi.

Module-1 Issues in the Indian Economy:

National Income-Trends, Poverty and Inequality, Problem of Unemployment, Parallel Economy in India, Human Resource Development & Social Infrastructure (Education and Health), Role of NGOs in Development.

Module-2 Selected Problems of the Indian Economy

Growth of Monopolies and Concentration of Economic Power, Multinationals in India, Problem of Sickness in Industries in India, Problems of Small Scale and Cottage Industries, Liberalisation, Privatisation and Globalisation of the Indian Economy, Financial Sector Reforms, Indian Agriculture and the WTO

Module-3 Economics of Agriculture

Linkages between Agriculture and Industry, Traditional Agriculture and its Modernisation, Agricultural Development Models: Lewis, Schultz, and Mellor; Cobweb Model. Farm Size; Production and Productivity - Introduction, Relationship between Farm Size and Productivity, Green Revolution, Returns to Scale and the Inverse Relationship; Size of the Farm and Profitability. Emerging Issues and Challenges of Indian Agriculture in World Trade Organisation WTO Sustainable Agricultural development scenario of India

References:

1. Ahluwalia, I.J. and I.M.D. Little (Eds.): India's Economic Reforms and Development (Essays in honour of Manmohan Singh).
2. Bardhan, P.K.: The Political Economy of Development in India.
3. Bawa, R.S. and P.S. Raikhy (Ed.): Structural Changes in Indian Economy.
4. Brahmananda, P.R. and V.R. Panchmukhi (Eds.): Development Experience in the Indian Economy: Inter-State Perspectives.
5. Chakravarty, S.: Development Planning: The Indian Experience,
6. Chelliah, Raja J. and R. Sudarshan: Income, Poverty and Beyond: Human Development in India.

7. Dantwala, M.L.: Dilemmas of Growth: The Indian Experience, Sage Publications, New Delhi.
8. Datt, R. (Ed.): Second Generation Economic Reforms in India.
9. Government of India, Planning Commission: Ninth Five Year Plan, 1997-2002, Vols. I & II.
10. Government of India, Economic Survey, (Annual), Ministry of Finance, New Delhi.
11. Gupta, S.P.: Post-Reform India: Emerging Trends, Allied Publishers, New Delhi.
12. Jain, A.K.: Economic Planning in India.
13. Jalan, B.: The Indian Economy - Problems and Prospects.
14. Jalan, B.: India's Economic Policy - Preparing for the Twenty First Century.
15. Joshi, V. and I.M.D. Little: India: Macro Economics and Political Economy.
16. Kumar, A.: The Black Money in India.
17. Mookherjee, D. (Ed.): Indian Industry: Policies and Performance.
18. Nayyar, D. (Ed.): Trade and Industrialization.
19. Parikh, K.S.: India Development Report -1999-2000.
20. Reserve Bank of India, Report on Currency and Finance, (Annual).
21. Sandesara, J.C.: Industrial Policy and Planning, 1947-1991; Tendencies, Interpretations and Issues.
22. Sen, R.K. and B. Chatterjee: Indian Economy: Agenda for 21st Century (Essays in honour of Prof. P.R. Brahmananda).
23. Sen, S.: Trade and Dependence: Essays on the Indian Economy.
24. Subramanian, S. (Ed.): Measurement of Inequality and Poverty.
25. Srinivasan, T.N. (Ed.): Eight Lectures on India's Economic Reforms.
26. World Bank: India: Reducing Poverty, Accelerating Economic Development.
27. Bhaduri, A.: The Economic Structure of Backward Agriculture.
28. Bilgrami, S.A.R.: An Introduction to Agricultural Economics, Government of India, Economic Survey (Annual).
29. Gulati, A. and T. Kelly: Trade Liberalisation and Indian Agriculture.
30. Rao, C.H. Hanumantha: Agricultural Growth, Rural Poverty and Environmental Degradation in India.
31. Rudra, A.: Indian Agricultural Economics: Myths and Reality.

Module 1: Introduction

Central problems of an economy and their solution in different economic systems. Price mechanism. Production possibility curve. Consumers' and Producers' surpluses. The elementary theory of demand and supply. The elasticities of demand and supply. Applications of the demand-supply apparatus in price control, rationing, and taxation.

Module 2: Theory of Consumer's Behavior:

Concepts of cardinal utility, Derivation of demand curve, Limitations of cardinal utility analysis. Ordinal Utility Theory: Consumer's Preferences. Indifference Curves. Budget Line. Consumer's Equilibrium. Income and Substitution Effects. Price consumption curve and the derivation of demand curve for a commodity.

Module 3: Theory of Producer's Behavior:

The concept of production function. Isoquants. Producer's equilibrium with a single variable input and with two variable inputs. Returns to a factor and returns to scale. Different concepts of cost and revenue. Short-run and long-run cost analysis.

Module 4: Market Structure:

Characteristics of perfect competition. Short-run and long-run equilibrium of the firm and the industry. Short-run and long-run supply curve of the firm and the industry. Monopoly and its features. Equilibrium under monopoly. Discriminating monopoly. Characteristics of Monopolistic Competition and Oligopoly.

Module 5: National Income:

Concepts of national income and related aggregates. Different methods of measuring national income. Difficulties in measurement. Consumption function. Investment and saving. Aggregate demand and aggregate supply. Multiplier

analysis with AD curve and price level changes. Aggregate supply in short run and long run. Fiscal policy- Impact of changes in govt. expenditure and taxes.

Module 6: Money, Banking and Inflation:

Functions of money. Fisher's version and Cambridge version of quantity theory of money. Keynesian liquidity preference. Functions of Central Banks and Commercial Banks. Credit creation.. Demand-pull and cost-push inflation. Anti-inflationary monetary and fiscal policies.

Module 7: Environment and Public Goods:

Resources of the environment - Renewable and exhaustible - Residuals and pollutants - Types of pollutants and sources of pollution - point and non-point-source - Environment as an economic good; Environmental quality as public goods- Externalities: Negative and positive externalities-Environmental damages as negative Externalities - Relation between public goods and externalities.

Module 8: Agriculture in the Indian Economy:

Problems and solutions regarding low productivity. Land reforms. Technological changes and their impact on the economy. Agricultural credit. Agricultural labour. Agricultural marketing.

Module 9: Indian Planning Strategies:

Overall objectives of the Five Year Plans. Achievements and failures. Economic reforms since 1991. Globalisation and its impact on India.

References:

1. Krugman, P.R. & M. Obstfeld (1994): *International Economics: Theory and Policy*. Glenview, Foresman.
2. Salvatore, D. (1997): *International Economics*, Prentice Hall, Upper Saddle River, N.J. New York.
3. Koutsoyiannis, A (1990): *Modern Microeconomics*, Macmillan, London
4. Gould, J.P. and Lazer: *Microeconomic Theory*, Richard D. Irwin, Homewood.

5. Pyndick, R.S., and D.S. Rubinfeld (1998): *Microeconomics*, Prentice Hall of India, New Delhi.
6. Salvatore: *Microeconomics*, Oxford University Press.
7. Lipsey and Chrystal: *Economics*, Oxford University Press.
8. Mankiw: *Macroeconomics*, Worth Publishers.
9. Soumyen Sikdar: *Principles of Macroeconomics*, Oxford University Press.
10. Sweezy, Paul M. (2002); *Essays on Keynesian Economics and Crisis of Capitalism*, Cornerstone Publications, India.
11. Bhaduri, Sunil. (1999): *Macro Economics*; New Central book Agency.
12. Patnaik, Prabhat (1997): *Macro Economics*, Oxford University Press.
13. Field, Barry C. (1997): *Environmental Economics: An Introduction* (2nd Ed.), McGraw Hill Co. Inc. New York.
14. Kolstad, C.D. (2000): *Environmental Economics*, Oxford University Press, New York..
15. Bhattacharya, Rabindra N (2001): *Environmental Economics: An Indian Perspective*, OUP, New Delhi.
16. Hussen Ahmed M: *Principles of Environmental Economics: Economics, Ecology and Public Policy*, Routledge.
17. Singh, Katar and Anil Shishodia (2007): *Environmental Economics*, Sage Publications.
18. Dasgupta, Partha. (2007): *A Short Introduction to Economics*, Oxford University Press
19. Ostrom, Elinor. (1990): *Governing The Commons*, Cambridge University Press
20. Mulier, M.G. (1988): *Readings in Macro Economics*, Surjeet publications
21. Rudra, Ashok (1982): *Indian Agricultural Economics: Myths and Realities*, Allied Publishers.
22. Dutta, R. and K. P. M. Sundharam (latest edition): *Indian Economy*, S. Chand & Co. Ltd, New Delhi.
23. Misra, S. K. and V. K. Puri (latest edition): *Indian Economy*, Himalaya Publishing House, Mumbai.
24. Bhalla, G.S, (2007): *Indian Agriculture since Independence*, National Book Trust, India.
25. Joshi, Vijay and I.M.D Little (1999): *India-Macro Economics arid political Economy 1964-1991*, Oxford University Press, New Delhi.
26. Bhaumik, S.K. (2008): *Reforming Indian Agriculture – Towards Employment Generation and Poverty Reduction*, Sage Publications.
27. Ghatak, S. (1986): *Introduction to Development Economics*, Routledge, London.
28. Kindeberger, C.P. (1997): *Economic Development*, McGraw Hill, New York.

29. Todaro, M.P. and S.C. Smith (2003): Economic Development, Pearson Education (Singapore) Pvt. Ltd, Indian Branch, Patparganj, Delhi.
30. Roy, Debraj (1999): Development Economics, OUP New Delhi.
31. Bhagwati, J.(ed.) (1981): International Trade: Selected Readings, Cambridge University Press, Mass..
32. Musgrave, Richard A. And Peggy B Musgrave (1989): Public Finance in Theory and practice, McGraw-Hill Book Company, Singapore.
33. Due, John F. and Ann F. Friedlander (1997): Government Finance: Economics of the Public Sector AITBS Publishers and Distributors, Delhi.
34. Houghton, E.W.(ed) (1998): Public Finance, Finance, Penguin, Baltimore.
35. Dalton, Hugh (1954): Principles of Public Finance, 4th edition, Routledge and Kegan Paul, London.
36. Ganguly, Subrata (1975), Public Finance, Nababharat Publisher, Calcutta.
37. Chowdhury R.K. (1993), Public Finance and Fiscal Policy, Kalyani Publishers, Ludhina.

SEMESTER - II

Course No: 201

Microeconomic Analysis-II

4 Credits

Module-1: Economics of Market Structure:

Collusive oligopoly models, Noncollusive Oligopoly models - Cournot, Bertrand, Chamberline, Stackelberg- Average cost pricing theory of Hall and Hitch.

Module-2: Theory of Games and Economic Behaviors:

Representation of games -zero sum game –non zero sum game -Nash equilibrium (in pure and mixed strategies) - Prisoner’s dilemma, repeated games.

Module-3: General Equilibrium Analysis:

General versus partial equilibrium, Model with production: one consumer, one producer; Walrasian and Edgeworthian foundations of perfect competition; Walrasian Equilibria - Existence and Uniqueness, Stability, Efficiency Properties

of Walrasian Equilibria. Non-Walrasian Equilibria- Non-Tatonnement Processes; Rationing Equilibria, Effective Demand, Micro foundations of Macroeconomics.

Module-4: Welfare Economics:

Pareto Efficient Resource Allocation. Welfare Functions and Pareto Criterion; Pareto Efficiency and Competitive Markets, Social Welfare Functions of Bergson and Samuelson -theory of second best-Arrow's impossibility theorem- Equity-Efficiency Trade off.

References:

1. Aumann (1974): "Subjectivity and Correlation in Randomized Strategies", *Journal of Mathematical Economics* (1): 67-96.
2. Gauld, J.P. and Edward P. L. (1996), *Microeconomic Theory*, Richard. Irwin, Homewood.
3. Gravelle, H and R. Rees (2004) *Microeconomics*, (3rd Edition), Pearson Education.
4. Green, H. and V. Walsh (1975): *Classical and Neo-classical Theories of General Equilibrium*, OUP, London.
5. Hicks, J. (1939): *Value and Capital*, Clarendon Press, Oxford.
6. Jeffrey, M. Perloff (1999): *Microeconomics*, Addison-Wesley.
7. Jehle, G. and J. Reny (2000), *Advanced Microeconomic Theory*, Pearson Education.
8. K.J. Arrow and F. H. Hahn (1971), *General Competitive Analysis*, Holden-Day.
9. Kreps, D (1992), *A course in Microeconomic theory*, Prentice Hall of India.
10. Kreps, D. (1984): *Signaling Games and Stable Equilibrium*, Mimeo.
11. Mansfield, E. (1997): *Microeconomics* (9th Edition), W.W. Norton and Company, New York.
12. Mas-Colell, M.D. Whinston, J.R. Green: *Microeconomic Theory*, Oxford University Press, New Delhi.
13. Mukherji , A (2002), *Introduction to General Equilibrium Analysis: Walrasian and Non-Walrasian*
14. Nash, J.F. (1951): "Non-Cooperative Games", *Annals of Mathematics* 54: 289-95.
15. Osborne, Martin J. (2004): *An Introduction to Game Theory*, OUP, New York.

16. R.S Pindyck, R.S, D.L.Rubinfeld & P.L.Mehta (2000): *Microeconomics*, 3rd edition; Prentice-Hall India.
17. Rosenthal, R. (1981): “Games of Perfect Information, Predatory Pricing and the Chain-Store Paradox”, *Journal of Economic Theory* 25: 92-100.
18. Salvatore, Dominick (2002): *Microeconomic Theory and Applications*, Oxford University Press.
19. Schelling, T. (1960): *The Strategy of Conflict*, Cambridge Mass: Harvard University Press.
20. Sen, Anindya (1999): *Microeconomics: Theory and Applications*, OUP, Delhi.
21. Starr, R. M (1997), *General Equilibrium Theory: An Introduction*, Cambridge University Press.
22. Tirole Jean (1996): *The Theory of Industrial Organisation*, Prentice Hall of India Pvt. Ltd.
23. Varian, H. (2000), *Microeconomic Analysis*, W.W. Norton, New York.
24. Wilson, A. James (1977): “A Test of the Tragedy of the Commons”, in Garrett Hardin and John Baden, eds., *Managing the Commons*, San Francisco, W.H. Freeman.

Course No: 202

Macroeconomic Analysis-II

4 Credits

Module 1: The role of expectations in macroeconomics-Keynes’ treatment of expectations - Adaptive Expectations Hypothesis-The Rational Expectations concept and its implications-the New Classical policy conclusions-the Keynesian counter critique-Auction market vs. Contractual Views of the labour market.

Module 2: New Classical Directions -Real Business Cycle models-central features -a simple real business cycle model-effects of technology shocks-fiscal and monetary policy impacts-questions about Real Business Cycle models.

Module 3: New Keynesian directions-the macroeconomics of wage and price rigidity Real wage rigidity-the efficiency wage model-wage determination in the efficiency wage model-employment and unemployment in the efficiency wage model-

sources of price stickiness-sticky price(menu cost) models-monetary and fiscal policy-insider-outsider models and hysteresis.

References:

1. Begg, D.K.H: The Rational Expectations Revolution in Macroeconomics Theories and Evidence.
2. Froyen, R.T. (1993): Macroeconomics-Theories And Policies.
3. Mankiw, N.G (2002): Macroeconomics.
4. Plosser, C. (1989): Understanding Real Business Cycles In Journal Of Economic Perspectives (Summer).
5. Gordan, R.T. (1990): ‘What Is New Keynesian Economics?’ in *JEL*, Sept.
6. Froyen, R.T. (1993): *Macroeconomics-Theories and Policies*.
7. Mankiw, N.G (2002): *Macroeconomics*.
8. Dornbusch,R , Fischer , Startz: Macroeconomics

Course No: 203 Mathematical Methods in Economics -II 4 Credits

Module-1. Non-Linear programming:

Kuhn –Tucker condition, Graphical solution, Economic Interpretation of Kuhn-tucker condition, Kuhn-Tucker Suffency Theorem; Application

Module-2. Transportation:

Basic concepts of transportation tableau, Linear programming formulation of transportation problem; initial basic feasible solution- the North-West corner rule, Lowest cost entry method, Vogel’s approximation method, optimum solution-stepping stone method, modified distribution method; exceptional cases of transportation problem,-maximization problem, prohibited route, unbalanced problem, degeneracy in transportation problem

Module-3. Game Theory:

Zero-sum game and LP Formation of game, Dominance Rule, Mixed Strategy Non-zero sum games: some simple examples, Co-operative and Non-cooperative

games, Static and Dynamic games, Nash Equilibrium. Prisoners Dilemma, Duality in game theory.

References:

1. Beavis and Dobbs (1990): *Optimization and Stability Theory for Economic Analysis*, Cambridge University Press.
2. Dixit, A.K (1990): *Optimization in Economic Theory*, Oxford University Press.
3. Fuenta Angel de la (2000): *Mathematical Methods and Models for Economists*, Cambridge University Press.
4. Chiang and Wainwright (2005): *Fundamental Methods of Mathematical Economics*, Mcgraw-hill.
5. Chiang, A.C (1992): *Dynamic Optimization*, McGraw-Hill.
6. Simon, C.P. and L. Blume (1994): *Mathematics for Economists*, Norton
7. Silberberg, E. (1990): *The Structure of Economics: A Mathematical Analysis*, Mcgraw-Hill.
8. Hadley, R.(1960): *Linear Algebra*, Addison-Wesley.
9. Sundaram, R.K. (1996): *A First Course in Optimization Theory*, Cambridge University Press.
10. Hoy, et al. (2001): *Mathematics for Economics*, Prentice-Hall.
11. Osborne, M.J. (2004): *An Introduction to Game Theory*, Oxford University Press.
12. Aliprantis, C.D. and S.K.Chakrabarti (1999): *Games and Decision Making*, Oxford University Press.

Course No: 204

Introductory Econometrics

4 Credits

Module-1. Simple and Multiple Regression Model:

Assumptions about Disturbances (u), Methods of Least Squares Estimation, Gauss-Markov Theorem, The Matrix Approach - Var-Covariance Matrix of u , Properties of Least Square Estimators, Testing for the Significance of Individual Regression Coefficients Violation of assumptions of disturbance term (U). Maximum likelihood method.

Module-2. Errors in Variables:

Errors in Equation and Errors in variables, Consequences of the Properties of Least Square Estimators, Errors of Measurement in the Explanatory Variables and Consequences of the Properties of Least Square Estimators, Alternative Methods of Estimation.

Module-3. Problem of Heteroscedasticity:

The problem stated, illustrations of the problem, Plausibility of the Assumption, Consequences of Heteroscedasticity, Detection of Heteroscedasticity, Iterative Methods of Estimation.

Module-4. Problem of Autocorrelation

Autocorrelation, The Assumption of Serial Independence, Sources of Autocorrelation, Plausibility of The Assumption, The First-Order Autoregressive Scheme, Consequences of Auto-correlation, Detection of Auto-correlation, Alternative Methods of Estimation.

Module-5. Multicollinearity

Introduction, The Assumption of Non-multicollinear Regressors, Plausibility of the Assumption, Consequences of Multicollinearity, Tests for the presence of Multicollinearity.

Module-6. Autoregressive and Distributional Lag Models

Autoregressive linear model, Distributed lag model, The Koyck Approach to Distributive Lag Models, Rationalization of the Koyck Model-The Adaptive Expectation Model, The Stock Adjustment or Partial Adjustment Model, Combination of Adaptive Expectations and Partial Adjustment Models, Estimation of Autoregressive Model, Almon scheme.

References:

1. Goon, Gupta, Dasgupta (2008) Fundamental of Statistics .Vol. I. World Press Private Ltd. Kolkata

2. Gujarati, D.N. (2003): *Basic Econometrics (4/e)*, McGraw-Hill International Edition, New York.
3. Wooldridge, Jeffrey, M. (2006): *Introductory Econometrics: A Modern Approach (3/e)*, Thomson South-Western.
4. Johnston, J (1992): *Econometric Methods(4/e)*, McGraw Hill.
5. Maddala, G.S. (1989): *Econometrics*, McGraw Hill, New York.
6. Koutsoyannis, A. (1990): *Theory of Econometrics*, London, Macmillan.
7. Wannacot, R.J. & T.H Wonnacott(1970): *Econometrics*, Wiley.
8. Klein, L.R. (1953): *A Text Book of Econometrics*, Row Peterson
9. Goldberger, A.S. (1984): *Econometric Theory*, Wiley.
10. Pindyck, R.S. & Rubinfeld D.S. (1997): *Econometric Methods and Econometric Forecasts (4/e)*, Irwin-McGraw Hill.
11. Wannacot, R.J. & T.H Wonnacott (1970): *Econometrics*, Wiley.

Course No: 205

Public Economics-II

4 Credits

Module-1. Fiscal Policy and Public Debt Management:

Fiscal Policy and its link with Monetary Operations. Fiscal policy for Stabilization. Compensatory fiscal policy. Fiscal vs monetary policy. Alternative fiscal policy for full employment and balanced budget multiplier, Fiscal policy for Economic Development. Limits of Fiscal Policy. Management of Public Debt, Ricardian Equivalence. Public debt sustainability in India..Debt obligation of Central and State Government. Burden of public debt .Public Debt: Problems and Issue.

Module-2. Mechanics of Budget & India's Budgetary Policy:

Budget terms and budget concepts, importance, objective and modern classification of budget, types of budget, different concepts of budget deficit & their implications in Indian context. Budgetary trend and policy in India. Analysis of the latest Central Government Budget in India. Importance of revenue &

capital Budget – Trends of Central & State Government Budget in India. Deficit Financing and its effects on Indian Economy.

Module-3. Indian Tax Structure:

Tax system reform and Tax policy in India. Tax evasion and Black money in India. Taxes of Central and State Government. Indian tax structure, Revenue of the Union, States and local bodies, Major taxes in India, Direct and indirect taxes, taxation on agriculture, expenditure tax – Reforms in direct and indirect taxes, taxes on services, non-tax revenue of centre, state and local bodies;. Structure and design of Goods and Services Tax (GST), Value Added Tax (VAT) in India. Government Subsidies in India.

Module -4. Public Expenditure in India:

Trends and Issues. Public expenditure and deficit financing in India, Composition of the Govt. Expenditure. Causes of the rise of Public Expenditure. Sources of Revenue and Expenditure of Union and State Government. Accountability & efficiency of Public Expenditure in India. Public Expenditure on Social sector in India.

Module-5. Fiscal Federalism in India:

India's Fiscal Policy. Finance Commission of India and Federal fiscal transfer to Indian States. Fiscal Responsibility and Budget Management Act (FRBMA) 2003. Role of Finance Commission in maintaining the Fiscal Federalism in India. Problems of imbalance in state resources' and state indebtedness. Centre State financial relation.

Module-6. Sources of Indian Public Finance data:

State and central budget documents. Finance India audited by CAG. Reserve Bank of India. Report of the Ministry of Finance, Govt. of India RBI State Finance: A Study of State Budget. Indian Public Finance Statistics, Ministry of Finance, Govt. of India.

References:

1. Jyotsna Jalan, Sugata Marjit, and Sattwik Santra (2016) *India PubliFinance and Policy Report 2016. Fiscal Issues and Macro Economy*
2. Cullis, John and Philip Jones (1998, 2nd edition): *Public Finance and Public Choice*, Oxford University Press.
3. Peacock, A. and G. K. Shaw (1976): *The Economic Theory of Fiscal Policy*, George Allen and Unwin, London.
4. Jain, I. (1988): *Resource Mobilization and Fiscal Policy in India*, Deep & Deep Publications, New Delhi.
5. Mundle, S. (1999): *Public Finance Policy: Issues for India*, Oxford University Press, Delhi.
6. Government of India (various years): *Economic Survey*, Ministry of Finance, New Delhi.
7. Mundle, S. (1999): *Public Finance Policy: Issues for India*, Oxford University Press, Delhi.
8. Amaresh Bagchi, (2005) *Readings in Public Finance*, Oxford University Press USA
9. Rao G and Rakshit M (2011) edited : *Public Economics : Theory and Policy : Essays in Honour of Amaresh Bagchi* . Sage Publication Pvt. Ltd . India
10. Gupta J.R (2011): *Public Economics in India: Theory and Practice*. Atlantic; 2nd Revised & Enlarged Ed. Edition.
11. Thakur A K & Salam A edited (2007) : *Indian Public Finance and the Twelfth Finance commission* . Deep and Deep Publications, Papers presented at the 88th annual conference of Indian Economic Association.
12. Agrawal Pratibha (2012) *Fiscal Federalism in India: Impact of Union Transfers on State Finances* . New Century Publications. New Delhi
13. Brown, C. V. and P. M. Jackson (1982): *Public Sector Economics*, Martin Robertson, Oxford. Chap 4. [4/e, Blackwell, 1996]
14. Tanzi, Vito and Ludger Schuknecht (2000): *Public Spending in the 20th Century: A Global Perspective*, Cambridge University Press. Chap I, pp.3-22.
15. Anthony Barnes Atkinson and Joseph E. Stiglitz, (1980) *Lectures in Public Economics*, McGraw Hill, New York.
16. Aronson, J. Richard (1985): *Public Finance*, McGraw-Hill Book Company, Chap 6
17. Oates, Wallace (1972): *Fiscal Federalism*, Harcourt Brace and Johanowich, New York.
18. Musgrave, R. A. (1977): *Essays in Fiscal Federalism*, Greenwood West Port.

19. Srivastava, D. K. (ed.) (2000): *Fiscal Federalism in India*, Har-Anand Publications Ltd., New Delhi.
20. Chelliah, Raja J. et al (1981): *Trends and Issues in India's Federal Finance*, National Institute of Public Finance and Policy, New Delhi.
21. Singh Nivikar and Gobindo Rao (2006) : *The Political Economy of Federalism in India*. Oxford University Press.
22. Rao, M. Govinda & Tapas K. Sen (2006): *Fiscal Federalism in India: Theory and Practice* . Macmillan. New Delhi:
23. Cullis, John and Philip Jones (1998, 2nd edition): *Public Finance and Public Choice*, Oxford University Press.
24. Mundle, S. (1999): *Public Finance Policy: Issues for India*, Oxford University Press, Delhi.
25. Government of India (various years): *Economic Survey*, Ministry of Finance, New Delhi.
Mundle, S. (1999): *Public Finance Policy: Issues for India*, Oxford University Press, Delhi.

Course No: 206

Research Methods in Economics

4 Credits

Module 1. Introduction to Research Methodology in Economics:

Meaning and Objective of Social Research, Criteria of Good Social Research, Social Science research: Scope of Research in Economics, Problems in Economic Research, Pure and Applied Research, Conceptual and Empirical Research, Qualitative and Quantitative Research, Descriptive and Analytical Research, Exploratory Research, Experimental Research, Evaluative Research, Case Study.

Module 2: Defining Research Problems, Design of Research and Sampling:

Identification of a research Problems, Techniques involves in defining problems, Formulating and clarifying research question Features of a Good Research design, Types of research design, and Limitation. Design for Descriptive, Exploratory and Experimental Research, Census and Sample: Meaning and importance, Steps in Sampling Design, Features of Good Sampling. Various types

of sampling techniques. Sample Size and the power of research. Calculating sample size. Sample Size in inferential Statistics.

Module 3: Measurement & Scaling Techniques

Measurement in Research, Measurement Scales, Sources of error in measurement. Test of Sound measurement, Techniques of developing measurement tools. Scaling: Meaning of Scaling, Scaling classification bases, Important Scaling techniques, Scale construction techniques.

Module 4: An Introduction to Using Statistics in Research

Methods of data collection, data processing, organizing data: Descriptive Statistics, Measures of variability, skewness and relationships, Normal Distribution and measures of uncertainty, selects a level of significance, Estimation of population parameter and Testing of statistical hypothesis. Selection of right statistical test and data interpretation: Chi-Square test (non parametric), t test , Z test (Parametric). Analysis of Variance Covariance techniques.

Module .5 Multivariate techniques and data analysis

Multivariable techniques: Characteristics & classification, important multivariate techniques, multiple regressions, multiple discriminant analyses, Multivariate analysis of variances. Canonical correlation analysis, Factor Analysis.

Module. 6 Qualitative Research Method and data analysis

Qualitative Research and Techniques, Theories and Method in Qualitative data analysis, Formatting and Processing. Stages in Qualitative analysis, Ensuring Rigour. Practicalities. Analysis of qualitative data using statistical software.

Module. 7 Computer Applications in Research

Use of Excel & SPSS for analyzing Primary and secondary dataset

References:

1. Good William and Hatt Paul (1987), Methods in Social Research, Mc Graw Hill, London
2. Lal Das (2000), Practice of Social Research, Rawat Publication,
3. Jaipur Ghosh B.N. (1982) Scientific Methods & Social Research, Sterling Publishers Pvt. Ltd., New Delhi Wilkinson and Bhandarkar (2002), Methodology and Techniques of Social Research,
4. Baily K.D. (1982), Methods of Social Research, Free press Publications, New York.
5. Bajpai S.R. 1969. Social Survey and Research, Kitab Ghar Publication, New Delhi Gupta,
6. Gupta S. C. (1981), Fundamentals of Statistics, Himalaya Publishing House, Bombay.

Course No: 207(IDC-2)**Basis Statistics****4 Credits****Module-1: Introduction:**

Statistical data - Classification and presentation - Statistical population - Collection of data –Variable and attribute - Different columns of a standard frequency distribution - Discrete and continuous variables - Choice of class intervals - Diagrammatic representation of frequency distribution - Cumulative frequency distribution - Ogive.

Module-2: Measures of Central Tendency:

Arithmetic mean, median and mode (for both grouped and ungrouped data) - Comparison of mean, Median and mode - geometric mean and harmonic mean (for both grouped and ungrouped data) - Complete mean (average from combined data).

Module-3: Measurers of Dispersion:

Definition of dispersion - Distinction between absolute and relative measures - Some absolute measures like range, quartile deviation, mean deviation and standard deviations - Properties of different measures - Mean and S.D. of a combined set-Relative measures like coefficient of variation etc. - Lorenz curve: Representation of distribution of income - Measures of inequality - Gini

Coefficient and Lorenz curve, Central and non-central moments; Skewness and Kurtosis.

Module-4: Bivariate Distribution:

Scatter Diagram; Covariance; Simple Correlation Coefficient; Properties of Correlation Coefficient; Calculations of Correlation Coefficient; Concept of Regression; Properties of Linear regression; Relationship between Correlation Coefficient and Regression Coefficient ; Rank Correlation- Spearman's Rank Correlation Coefficient.

Module-5: Index Numbers:

Problems in the construction of index numbers - Purpose of construction of index number - Choice of the base period, Choice of the commodities, choice of weights/ interpretation of the index .errors, index numbers - Tests for index number - Chain index - Chain based versus fixed based indices - Cost of living index - Laspeyres' and Paasche's formulae - Marshall and Edgeworth formulae - Fisher's ideal index - Uses of index numbers (official index number)

Module-6: Sampling:

Method of complete enumeration or census method and partial enumeration or sampling - Sampling techniques- Random sampling - Sampling distribution of an estimator (distribution of X from a normal distribution) - Fundamental ideas of statistical inference.

References:

1. Goon, A, Gupta, M and Dasgupta,B (1986): Fundamentals of Statistics, Vols. I & II, The World Press Private Limited, Calcutta.
2. Hoel,P.G., Port,S.C. and Stone,C.J (1972): Introduction to Statistical Theory, Houghton Mifflin Co., Boston (also Universal Books,Delhi)
3. Spiegel,M and Lindstrom,D(2010): Statistics,2nd edition, Schaum Series, McGraw Hill(India).
4. Das, N.G.(2009): Statistical Methods (Part I & II), McGraw Hill (India).

5. Nagar, A.L, and R.K.Das (1977): Basic Statistics, OUP, Delhi.
6. Yule, G.U. and Kendall, M.G. (eds.) (1958): Introduction to the Theory of Statistics, Charles Griffin & Co. Ltd. London.
7. Murthy. M.N. (1967): Sampling Theory and Methods, Statistical Publishing Society, Calcutta.
8. Hogg, R.V. and A.T. Craig (1970): Introduction to Mathematical Statistics (3rd edition), Macmillan Publishing Co. New York.
9. Mathai & Rathie : Probability & Statistics, Macmillan India.

SEMESTER-III

Course No: 301

International Economics – I

4 Credits

Module-1. New Trade Theories; Economies of Scale and International Trade; International Trade under imperfect competition ; intra-industry trade; International Trade and Dynamic Technological Differences.

Module-2. Foreign Exchange Market:

Function of foreign exchange market, earning and spending of foreign exchange instruments of foreign payments, foreign exchange rates, exchange rate quotations and forward market quotation, Spot market and forward market, hedging in the foreign exchange market, determination of exchange rate. Factors affecting the exchange rate, Efficiency of the foreign exchange market.

Module-3: Exchange Rates:

Nominal and Real Exchange Rates; Determinants of Real Exchange Rates; Policies influencing the Real Exchange Rate; Eurodollar Market.

Module-4. Exchange Rate in the Long-run:

Purchasing Power Parity Theory; Absolute and Relative Purchasing Power Parity Theories; Limitations of the theory, Dornbusch Model of Exchange Rate Overshooting.

Module-5: Theories of Foreign Investment:

Uncovered Interest Parity Theory; Covered Interest Parity Theory; Forward Rates and Spot Rates; Covered Interest Parity Arbitrage; Covered Interest Arbitrage margin. Arbitrage in the foreign exchange market, speculation in the foreign exchange. Volatility of Exchange Rate.

References:

1. Appleyard, D.R and Alfred J. Field Jr. (1998): *International Economics*, Irwin-McGraw Hill.
2. Kindleberger, C.P (1973): *International Economics*. R. D Irwin, Homewood.
3. Salvatore, D (1997): *International Economics*, Prentice Hall, Upper Saddle River, N.J., New York.
4. Krugman, P.R. and Obstfeld, M. (1994), *International Economics: Theory and Policy*, Glenview, Foresman.
5. Soderston, B.O. (1991), "International Economics," Macmillan Press Ltd, London.

Course: 302 Economics of Growth & Developments –I 4 Credits

Module-1: Basic Concepts:

Theory of Economic Growth, Growth Models of Harrod and Domar with technical progress. Growth and Income Distribution- Kaldor's Model.

Module-2: The Solow Model:

The Transition Dynamics- Level Effects and Growth Effects - The Convergence Debate.

Module-3: Basic Principles and Concepts of Development:

Meaning and evolution of the concept of development –Human Development Index and other Indices of Development and Quality of Life; Theories of Economic Development; Alternative approaches to standard of living – notions of commodities, capabilities, functioning and entitlements; Development and Freedom.

Module-4: Development and the Environment:

The basic issues of sustainable economic development – Externalities and other Market Failures – Theoretical and Empirical Relationships between Economic Growth and Environmental Quality.

References:

1. Aghion, Philippe, and Peter Howitt (1998): *Endogenous Growth Theory*, Cambridge Mass.: MIT press.
2. Bardhan, Pranab and Christopher Udry (1999): *Development Microeconomics*, Oxford University Press.
3. Barro, R. J and Xavier Sala-I- Martin(1995): *Economic Growth*, McGraw-Hill, New York.
4. Burmeister and Dobell (1970): *Mathematical Theories of Economic Growth*, Collier-Macmillan, New York.
5. Dasgupta, Partha (1993): *An Inquiry into Well Being and Destitution*, Clarendon Press.
6. Dasgupta, Partha (2002): *Human Well-Being and Natural Environment*, Oxford University Press.
7. Fukuda-Parr, S. and A. K. Shiva Kumar (eds.) (2003): *Readings in Human Development*, Oxford University Press.
8. Jones, C.I, (2002): *Introduction to Economic Growth*, W.W. Norton & Company.
9. Jones, H.G (1976): *An Introduction to Modern Theories of Economic Growth*, McGraw-Hill.
10. Lucas, Robert, E., Jr (2002): *Lectures on Economic Growth*, Oxford University Press.
11. Mankiw, N. Gregory, David Romer, and David N. Weil (1992): “A contribution to the Empirics of Economic Growth,” *Quarterly Journal of Economics*.
12. Ray, Debraj (1998): *Development Economics*, Oxford University Press.
13. Sen, A. K. (1985): *Commodities and Capabilities*, Oxford University Press.
14. Sen, A. K. (1999): *Development as Freedom*, Oxford University Press.
15. Sen, A. K. (2002): *Rationality and Freedom*, Oxford University Press.
16. Sen, A. K. and Jean Dreze (1989): *Hunger and Public Action*, Oxford University Press.
17. Sen, A. K. and Jean Dreze (eds) (1990): *The Political Economy of Hunger, Vols. I, II, & III*, Clarendon Press.
18. Solow, Robert M. (2000): *Growth Theory: An Exposition*, Oxford University Press.

19. Stiglitz, J. E. and H. Uzawa (ed.)(1969): *Readings in Modern Theory of Economic Growth*, MIT Press
20. Todaro, Michael P. and Stephen C. Smith: *Economic Development*, Pearson Education.

Course No: 303

Agricultural Economics – I

4 Credits

Module-1. Structure and Characteristics of Agriculture in LDCs:

Main attributes of traditional agriculture-Access to non-labour resources-The farming environment-Sources of risk and uncertainty in traditional agriculture.

Module-2. Institutional Constraints in Less Developed Agriculture and Remedial Measures:

Land market imperfections-Land reform and agrarian reform-Tenancy reform-Co-operative farming-Credit market imperfections-Rural money markets-Rural interest rate determination-Financial policies for agricultural development-Imperfections in the structure of agricultural marketing-Marketing efficiency-Marketing policies-Market functions-Regulated markets.

Module-3. Interlocking of Agrarian Markets:

Product-credit inter-linkage - Differential interest rates- Labour-credit inter-linkage -Lender's risk hypothesis- Employer's risk hypothesis- Consumption efficiency hypothesis and inter-linkage -Collateral pricing.

Module -4. Contributions, Statistics and Growth:

Role of Agriculture in Economic Development; Farm Size and Productivity Debate; Green Revolution; Agricultural Statistics in India: Coverage, Sources and Reliability.

Module-5. Agricultural Transformation and Rural Development:

The Imperative of Agricultural Progress and Rural Development; the Economics of Agricultural Development: Transition from Peasant Subsistence to Specialized

Commercial Farming; Toward a Strategy of Agricultural and Rural Development:
Some Main Requirements

Module-6. Agricultural Marketing:

Concepts – Market Functions and Costs – Structure- Marketing Efficiency;
Regulated market; Co-operative Marketing; Warehousing and Commodity
Boards; Future Markets.

Module-7. Behaviour of Agricultural Prices:

Agricultural Prices – Intra and Inter-seasonal and Inter-year Price Behaviour;
Characteristics of Agricultural and Industrial Pricing; Agricultural Price Indices;
Agricultural Price Policy – Its Role and Functions.

References:

1. Ellis, Frank (1988): *Peasant Economics*, Cambridge University Press.
2. Gangopadhyay, S.: *Some issues in Interlinked Agrarian Markets* in K.Basu, ed., Agrarian Questions
3. Ghatak, Subrata and Ken Ingersent (1984): *Agriculture and Economic Development*, Select Book Service Syndicate, New Delhi by arrangement with Harvester Press Ltd., London.
4. Gupta, M.R.: A Theory of Interlinkage based on the Consumption Efficiency Hypothesis
5. Norton, George W. and Jeffrey Alwang (1993): *Introduction to Economics of Agricultural Development*, McGraw-Hill, Inc.
6. Patnaik, U.: *Tenancy and Accumulation* in K.Basu, ed., Agrarian Questions
7. Rakshit, M.K.: *The Labour Surplus Economy*
8. Soni, R. N. (1998, 3rd edition): *Leading Issues in Agricultural Economics*, Shoban Lal Nagin Chand & Co, Jalandhar
9. Todaro, Michael P. and Stephen C. Smith (2003): *Economic Development*, Pearson Education (Singapore) Pte. Ltd., Delhi.
10. Vaidyanathan, A.: *Performance of Indian agriculture since Independence* in K.Basu, ed., Agrarian Questions.

Module 1. Extensions and Tests of Classical Model of Trade.

The Classical Model in Money Terms. The Dornbusch-Fischer-Samuelson Model. Transportation Cost: Comparative Static Analysis in the Dornbusch-Fischer-Samuelson Model. Evaluation of the Classical Model. Empirical Evidence of the Ricardian Model.

Module 2. Empirical Tests of the Factor Endowments Approach and Its aftermath

Testing the H-O Model; Attempted Reconciliation of Leontief's Findings. Alternative Theories of Comparative Advantage : Human Skills Theory, Product Life Cycle Theory , Imitation Lag Hypothesis, Linder Theory, Krugman Model, Imperfect Competition Model, Inter and Intra-Industry Trade, More Recent Tests of Factor Endowments Approach, Factor Endowments Approach and Income Inequality.

Module 3. Instruments and Impact of Trade Policies:

Tariff Analysis, Costs and Benefits of a Tariff, Other Instruments of Trade Policy, Effects of Trade Policy, Case for and Against Free Trade. Arguments for Protection, Trade Restrictions in a Partial Equilibrium Setting: The Small Country Case. Tariffs and Quotas: Impact in the Presence of Monopoly.

Module 4. Economic Integration:

Customs Union: Trade Creating and Trade Diverting Effects. Theory of Second Best and Other Static Welfare. Effects of Customs Union. History of Attempts at Economic Integration: EU, NAFTA, ASEAN, SAARC. Attempts at Economic Integration among Developing Countries.

Module 5. Trade Policy in Developing Countries.

Import-Substituting Industrialisation. Problems of the Dual Economy.

Export-Oriented Industrialisation: The South-East Asian Miracle.

Module 6. Trade and Growth.

The Importance of Trade to Development.

Trade Effects of Economic Growth.

Sources of Growth and the Production Possibility Frontier.

Growth, Trade and Welfare :Small and Large Country Cases.

Growth and the Terms of Trade: A Developing Country Perspective.

References:

1. G.Haberler(1936):The Theory of International Trade.W.Hodge and Co.London.
2. D.R Appleyard & Alfred J. Field Jr. (1998): *International Economics*, Irwin. McGraw Hill.
3. J.N.Bhagwati and T.N.Srinivasan(1983): *Lectures on International Trade*, MIT Press. Cambridge Mass.
4. D.R.Appleyard and Alfred J Field Jr.(1998): *International Economics*, Irwin McGraw Hill.
5. D.R. Appleyard and Alfred J. Field Jr. (1998): *International Economics*. Irwin McGraw Hill.
6. B.Balasa *et. al.* (1971): *The Structure of Protection in Developing Countries*, Johns Hopkins. University Press.
7. J.N.Bhagwati (1964) : “The Pure Theory of International Trade”, *Economic Journal*, March: pp1- 84
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9. M.Chacoliades (1990): *International Trade: Theory and Policy* .McGraw Hill.Kogakusha, Japan.
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14. A. Helpman and Paul Krugman (1985): *Increasing Returns, Imperfect Competition and International Trade*. Boston, MIT Press.
15. P. Krugman and M. Obstfeld (1997): *International Economics*. Addison-Wesley.
16. H. Helpman and P. Krugman (1989): *Trade Policy and Market Structure*. MIT. Press, Mass, Cambridge
17. R.G.Lipsey(1961):The Theory of Customs Union:A General Survey.Economic Journal.September,PP-498-513.
18. H.G.Mannur(1998).International Economics.Vikas Publishing House.New Delhi.
19. B.Balasa(1961):The Theory of Economic Integration.Vols I and II Irwin.Homewood.
20. World Bank (1985): *The East Asian Miracle: Economic Growth and Public Policy* Oxford University Press, Oxford.
21. B. Balasa (1985): "Export Policy Choices and Economic Growth in Developing Countries after the 1973 Oil Shock", *Journal of Development Economics*, May-June pp-23-25.
22. M. Chacoliades (1990): *International Trade: Theory and Policy*. McGraw Hill. Kogakosa Japan.
23. D.R. Appleyard and Alfred J. Field Jr. (1998). Irwin. McGraw Hill.

Course: 305 Econometrics with Computer Applications – I 4 Credits

Module 1. Simultaneous Equation Model:

The nature of simultaneous Equation Models, Structural Forms, Reduced Form, Final Forms. The Simultaneous Equation Bias, Inconsistency of OLS Estimation.

Module 2. The Identification Problem:

Under Identification, Just Identification and Over Identification, Rules of Identification: The order Condition and Rank conditions, Identification in Non-Linear Models but Linear in parameters; Multicollinearity and Identification.

Module 3. Estimation: The System approach:

Estimation of a Just Identified Equation; The Method of Indirect Least Squares (ILS): Estimation of an Over-Identification Equation, The Method of Two-Stage Least Squares (2SLS), The Method of Three Stage Least Square (3SLS); Method of Limited Information Maximum Likelihood (LIML).

Module 4. Regression with Qualitative Independent Variables:

Dummy Variable Technique: Testing Structural Stability of Regression Model Comparing to Regressions, Interaction Effects, Seasonal Analysis, Piecewise Linear Regression, Use of Dummy Variables, Regression with Dummy Variables, LPM, Probit and Logit Models. Censored and Truncated Regression models.

Module 5. Panel Data Analysis:

Pooled vs Panel Data; Fixed Effects Model; Random Effects Model; First-Difference Model.

Module 6. Applications of Demand and Production Analysis:

Use of Cross Section Data in Demand Analysis; Cobweb Models of Demand and Supply. Production Function Estimation-Studies in the Cobb-Douglas and CES Production Functions.

References:

1. A. Colin Cameron and Pravin K. Trivedi, *Microeconometrics: Methods and Applications*, Part V, Models for Panel Data, Cambridge University Press, 2005.
2. Akaike, H. (1973): 'Maximum Likelihood Identification of Gaussian Auto-Regressive Moving Average Models', *Biometrika*, 60.
3. Anderson, T.W. (1971): *The Statistical Analysis of Time Series*, New York, Wiley.
4. Bartleli, M.S. (1966): *Stochastic Processes*, (2/e), Cambridge University Press.
5. Box, G.E.P. and Jenkins, G.M. (1976): *Time Series Analysis, Forecasting and Control*, San Francisco: Holden Day.
6. Bridge, J.L. (1971): *Applied Econometrics*, North-Holland Publishing Co., Amsterdam.

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8. Chatfield, C. and A.J. Collious (1980): *Introduction to Multivariate Analysis*, Chapman and Hall, London.
9. Christ, C.F. (1976): *Econometric Models and Methods*, New York: Wiley.
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22. Hosterts, Pindek and Rubinfeld, D.L. (1997): *Econometric Models and Economic Prospects (4/e)* Unwin McGraw Hill New York.
23. Johnston, J & J. Dinardo (1997): *Econometric Methods (4/e)*, McGraw-Hill International Editions, New York.
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26. Koopman, T.C. 'Identification Problems in Economic Model Construction', *Econometrica*, Vol 17.

27. Koutsoyannis, A. (1990): *Theory of Econometrics*, London, Macmillan.
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32. Ramanathan, Ramu (2002): *Introductory Econometrics with Application (5/e)*, Fort Worth: Dryden Press.
33. Stubata, R. (1976): 'Selection of the Order of an Auto-Regressive Model by Akaike's Information Criterion', *Biometrika*, 63, 1178-126.
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35. Wooldridge, Jeffrey, M. (2002): *Econometric Analysis of Cross Section and Panel Data*, Cambridge, MA: MIT Press.
36. Wooldridge, Jeffrey, M. (2006): *Introductory Econometrics: A Modern Approach (3/e)*, Thomson South-Western.

Course No: 306 Demography and Human Population Studies – I 4 Credits

Module 1. The Meaning and Scope of Demography

Meaning of Demography -Natural Populations and Population Ecology, Scope of Demographic Studies-Magnitude of Population- Structure and Distribution of Population Dynamics -Location and Spatial Configuration of Population.

Module 2. Theories of Population

Pre-Malthusian Theories of Population, Malthusian Theory, Post-Malthusian Theories – Theories of Classical School of Political Economy. Socialist's views on population, Marxian theories-Demographic Transition Theory Optimum Population theory, Stable Population Theory, Biological Concept of Terminal' Populations -Economic Theories of fertility: Easterlin, Leibenstein, Caldwell, Becker- Social Theories of fertility: Freedman Davis-

Blake Model, Theories of Migration: Ravenstein Stonffer, Ziffe, Lee's theory and its modification, Michal Todaro, Theories of Urbanisation, Population & Economic Development , Population & Environment.

Module 3. Population Policies and Programmes in India

Evolution of Population Policy in India- The Shift in Policy from Population Control to Family Welfare and Women Empowerment. Family Planning Strategies and their Outcomes, Unmet need in Family Planning, Reproductive Health: Maternal and Child health and nutrition policies: Population and Strategies for Human Development of different Social Groups, The New Population Policy: Tasks before the National Population Commission. National Health Policy

Module 4 The Sources of Demographic Data

Census Enumerations -Vital Statistics -Census and Sample Registration System (SRS) in India -Features of Indian Census Reports and SRS Bulletins - Other Survey Data- NSSO/NCAER Household Survey DLHS, IHDS. Rural Health Statistics (MoHFW), HMIS (MoHFW) , UN World Population Prospect, , Human Mortality database, World development indicators

References:

1. Patrick Heuveline, Michel Guillot (2000) *Demography: Measuring and Modeling Population Processes*. Rutledge .USA
2. Agarwala, S.N. (1972): *India's Population Problem*, Tata-McGraw Hill, Bombay
3. Bogue, DJ. (1971): *Principles of Demography*, John Wiley, New York.
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5. Bose, Ashis (ed.) (1978): *India's Urbanization 1901-2001*, (2/e), Tata-McGraw Hill, Delhi
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7. Boserup, E. (1970): *Women's Role in Economic Development*, Earth Scan, London

8. Choubey, P.K. *Population Policy in India*, Kanishka Publications, New Delhi.
9. CMIE: *Basic Statistics Relating to the Indian Economy*, (Various issues) Mumbai.
10. Coale, A.J. and E.M. Hoover (1958): *Population Growth and Economic Development in Low Income Countries: A Case Study of India's Prospects*, Princeton University Press, Princeton.
11. Coale, A.J. (1972): *The Growth and Structure of Human Populations*, Princeton University Press, NJ.
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13. Jhabwala, R. and R.K.Subramanya (eds.) (2000): *The Unorganized Sector: Work Security and Social Protection*, Sage, New Delhi.
14. Keyfitz, N. (1985): *Applied Mathematical Demography*, Wiley, New York.
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18. Shariff, A. India Human Development Report, NCAER-OUP Delhi.
19. Shryock, H.S. and J.S.Siegel (1975): *The Methods and Materials of Demography*, Vols. I & II. Academic Press, New York
20. Spiegelnian, M. (1980): *Introduction to Demography*, Harvard University Press, Cambridge, Mass.
21. Srinivasan, L and A Shanff, (1998): *India towards Population and Demographic Goals* Oxford University Press, New Delhi.
22. Srinivasan, K. (1998): *Basic Demographic Techniques and Applications*, Sage, New Delhi
23. Thiriwall, A.P. (2000): *Growth and Development*, Macmillan, London:
24. Thompson, W.S. and D.T. Lewis (1965): *Population Problems* Tata-McGraw Hill, New Delhi.
25. UNDP, *Human Development Report* (various years), OUP, Delhi.

Module 1. Social Security and Social Protection for Women

Social Security of Women; Entitlements, Ensuring Economic Independence and Risk Coverage, Access to Credit and Insurance Markets; Role of Voluntary Organizations, Self-help Groups in Providing Social Security; Labour Market Biases and Gender Discrimination; Effectiveness of Collective Bargaining.

Module 2. Gender Politics and Empowerment

Review of Legislation for Women's Entitlements, Protection of Property Rights, Social Security - Schemes for Safety Net for Women; Need for Female Labour Unions; Affirmative Action for Women and Improvement in their Economic and Social Status.

Module 3. Gender Planning, Development Policies and Governance

Gender and Development Indices; Mainstreaming Gender into Development Policies; Gender-planning Techniques; Gender Sensitive Governance; Paradigm Shifts from Women's Well being to Women's Empowerment; Democratic Decentralization (*Panchayats*) and Women's Empowerment in India.

References:

1. Agarwal, B. (1994): *A Field of One's Own: Gender and Land Rights in South Asia*, Cambridge University Press, Cambridge.
2. Agnihotri, S.B. (2000): *Sex Ratio in Indian Population: A Fresh Exploration*, Sage Publications, New Delhi.
3. Amsden, A.H. (ed.) (1980): *The Economics of Women and Work*, Penguin, Harmondsworth.
4. Baud, I.S.A. (1992): *Forms of Production and Women's Labour: Gender Aspects of Industrialization in India and Mexico*, Sage Publications, New Delhi.
5. Boserup E. (1970): *Women's Role in Economic Development*, George Allen and Unwin, London.
6. Custers, P. (1997): *Capital Accumulation and Women's Labour in Asian Economics*, Vistaar, New Delhi.

7. Desai, N. and M.K. Raj. (eds.) (1979): *Women and Society in India*, Research Centre for Women Studies, SNDT University, Bombay.
8. Dwyer, D. and J. Bruce (Eds.): *A Home Divided: Women and Income in the Third World*, Stanford University Press, Stanford.
9. Engels, F. (1985): *The Origin of the Family, Private Property and the State*, Progress Publications, Moscow.
10. Evans H. and C. Ungerson, (eds.) (1983): *Sexual Divisions, Patterns and Processes*, Tavistock, London.
11. Government of India (1974): *Towards Equality – Report of the Committee on the Status of Women in India*, Department of Social Welfare, Ministry of Education and Social Welfare, New Delhi.
12. Gulati, S.C. (1998): *Fertility in India : An Econometric Analysis of a Metropolis*, Sage Publications, New Delhi.
13. Gupta, J.A. (2000): *New Reproductive Technologies, Women's Health and Autonomy*, Indo Dutch Studies on Development Alternatives, Sage Publications, New Delhi.
14. ILO (1978): *Women's Participation in the Economic Activity of Asian Countries*, ILO, Geneva.
15. Jain, D. and N. Banerjee (1985): *Tyranny of the Household*, Vikas Publishing House, New Delhi.
16. Kabeer, N. (1994): *Reversed Realities: Gender Hierarchies in Development thought*, Kali for Women, New Delhi.
17. Kabeer, N. (1994): "Reversed Realities: Gender Hierarchies in Development Thought", Kabeer, N. and R. Subrahmanyam (eds.) (1999), *Institutions, Relations and Outcomes: A Framework and Case Studies for Gender-aware Planning*, Kali for women, New Delhi.
18. Kalpagam, U. (1994): *Labour and Gender: Survival in Urban India*, Sage Publications, New Delhi.
19. King M. and M.A. Hill (eds.) (1993): *Womens' Education in Developing Countries: Barriers, Benefits and Politics*, John Hopkins, Baltimore.
20. Kuhn, A. and A.N. Wolpe (eds.) (1978): *Feminism and Materialism*, Routledge and Kegan Paul, London.
21. MHRD, GOI (1987): *Shram Shakti: Report of the National Commission on Self-Employed Women and Women Workers in the Informal sector*, Ministry of Human Resource Development, New Delhi.

22. Mies, M. (1986/1998): *Patriarchy and Accumulation on a World Scale: Women in the International Division of Labour*, Zed books, London.
23. Mishra S. (2000): *Voluntary Action in Health and Population: The Dynamics of Social Transition*, Sage Publications, New Delhi.
24. Mitra, A. (1979): *Implications of Declining Sex Ratio in India's Population*, Allied, New Delhi.

SEMESTER-IV

Course No: 401

International Economics-II

4 Credits

Module 1. Trade as an engine of growth; Thesis of Secular Deterioration of Terms of Trade (Prebisch-Singer Thesis) its empirical relevance and policy implication for LDCs.

Module 2. Economic Growth and the International Trade; Growth in Labor and Capital Accumulation over time; the Rybczynski Theorem; Different types of technical progress and the shape of the National Production Frontier; Impact of Growth on both small and large country; Immiserizing Growth; Trade under Imperfectly Competitive Market.

Module 3. Adjustments in Balance of Payments:

Measures to correct disequilibrium in the balance of payments, adjustments in the balance of payments under fixed and flexible exchange rates, cases for and against fixed exchange rate and flexible exchange rate, fixed versus flexible exchange rate, elasticity approach and absorption approach

Module 4. Monetary and Portfolio Balanced Approach to the balance of payments:

The Monetary Approach to Balance of Payments (MABP), The Monetary Approach to Exchange Rate (MAER), The Portfolio Balance Approach to Exchange Rate (PBAER), monetary and fiscal policies under fixed exchange rate system: Mundell-Fleming Model, Mundell-Fleming Model in terms of

IS,LM and External balance. Stabilization by monetary and Fiscal policies under fixed exchange rate system.

Module 5. Optimum Currency Areas:

Economic Integration and The Benefits of a Fixed Exchange Rate Area; Economic Integration and the Cost of a Fixed Exchange Rate Area; The rationale behind the decision to join a Currency Area; European Economic and Monetary Union.

References:

1. Bhagwati, J. (Ed) (1981), "International Trade", Selected Readings, Cambridge University Press, Massachusetts.
2. Salvatore, D. (1997), "International Economics", Prentice Hall, N.J. New York.
3. Soderston, B.O. (1991), "International Economics," Macmillan Press Ltd, London.
4. Appleyard, D.R and Alfred J. Field Jr. (1998): *International Economics*, Irwin-McGraw Hill.
5. Kindleberger, C.P (1973): *International Economics*. R. D Irwin, Homewood.

Course No: 402 Economics of Growth & Development-II 4 Credits

Module-1. The neoclassical growth model, Extension of the Solow Model: i. Golden-rule of Accumulation. ii. Endogenous labour force in the Solow Model.iii. Variable savings ratio in the Solow Model. The Convergence Model.

Module-2. The Simple Endogenous Growth Models: The AK Model, Lucas Model of Human Capital, The Arrow Model of Learning by doing, Romer Model of Endogenous Innovation.

Module-3. Issues in Inclusive Growth and, Sustainable Growth and Environment.

Module-4. Social Sector and Economic Development

Education as an instrument for Economic Growth. Human Capital – Human Capital vs Physical Capital – Components of Human Capital .Health Dimensions

of Development: Determinants of Health – Poverty, Malnutrition and Environmental Issues, Economic Dimensions of Health Care: Demand and Supply of Health Care. Inequalities in Health – Class and Gender Perspective. Institutional Issues in Health Care Delivery.

Module-5. Economics of informal sector:

Concept of informal sector, evidence from developing countries, Determinants of size of informal sector & its linkage structure with the rest of the economy theories and evidence Possible dynamic of the informal sector in the process of economic development some theories and evidence.

Module-6. Development Strategies:

The Rationale for Development Planning – The Planning Process: Some Basic Models – the Crisis in Planning – Government Failure and the Resurgent Preference for Markets over Planning

Development Political Economy: Theories of Policy Formulation and Reform. Choice of techniques as labour surplus economy. Trends in Governance Reform: Tackling the problem of corruption – decentralization - development participation. Stabilization, Adjustment, Reform and Privatization

References:

1. Barro, R. J and Xavier Sala-I- Martin (1995): *Economic Growth*, McGraw-Hill, New York.
2. Burmeister and Dobell (1970): *Mathematical Theories of Economic Growth*, Collier-Macmillan, New York.
3. Jones, H.G (1976): *An Introduction to Modern Theories of Economic Growth*, McGraw-Hill.
4. Jones, C.I, (2002): *Introduction to Economic Growth*, W.W. Norton & Company.
5. Ray, D (1998): *Development Economics*, Oxford University Press.
6. Solow, Robert M. (2000): *Growth Theory: An Exposition*, Oxford University Press.
7. Lucas, Robert, E., Jr (2002): *Lectures on Economic Growth*, Oxford University Press.
8. Aghion, Philippe, and Peter Howitt (1998): *Endogenous Growth Theory*, Cambridge Mass.: MIT press.
9. Stiglitz, J. E. and H. Uzawa (ed.)(1969): *Readings in Modern Theory of Economic Growth*, MIT Press

10. Todaro, Michael P. and Stephen C. Smith: *Economic Development*, Pearson Education.
11. Hart, Keith (1973): "Informal Income Opportunities and Urban Employment in Ghana", *Journal of Modern African Studies*, Vol. 11, No.1.
12. Mier, Gerald and James E. Rauch (2000): *Leading Issues in Development Economics*, Oxford University Press. Pp.313-15, 319-327.

Course No: 403

Agricultural Economics-II

4 Credits

Module 1. Elements of Peasant Economics

The economic definition of peasants--Peasants and economic efficiency-Analysis of peasant risk behavior-The Chayanov farm household model-new home economics.

Module 2. Agricultural Finance in India

Sources of agricultural finance--Commercial banks and co-operative banks-Credit structure-Evaluation of agricultural credit policies-Role of NABARD-Performance of agricultural credit programmes.

Module 3. Liberalization and Indian Agriculture

Agricultural policies since 1991-Commercialisation of agriculture-Food security-Diversification of agricultural activities-Trade patterns in agricultural commodities-Agroprocessing-Agricultural subsidies-WTO and IPRs.

Module 4. Terms of Trade, Foreign Trade and Planning

Meaning, Concepts and Debates over Terms of Trade. International Trade in Commodities and Agriculture. Sectoral Terms of Trade and Economic Growth.

Module 5. Demand and Supply of Agricultural Products

Demand for Farm Products: Factors affecting demand for Food, Engel's Law and Engel Elasticities Supply of Agricultural Products – Supply of Agricultural

Products – Supply of Individual Crops and Aggregate Supply Marketed Surplus – Cobweb Market Model- Distributed Lag Model – Nerlove’s PAAE Model
Supply Response of Perennial Crops Agricultural Supply Response Studies in India.

Module 6. State Interventions and Planning

Crop Insurance Scheme; Food Policy; Taxation Proposal; Income Support Programmes; Plan allocation and Five-year Plans

References:

1. Soni, R. N. (3/e) (1998): *Leading Issues in Agricultural Economics*, Shoban Lal Nagin Chand & Co, Jalandhar.
2. Ellis, F.: *Peasant Economics—Farm Households and Agrarian Development*
3. Bhat, K.S.(ed): Indian Economy under Globalisation Process
4. Singh, S.: *Structural Adjustment Programme and Indian Agriculture—Towards an Assessment of Implications* in EPW, Vol.30, No.51,1995
5. Gulati, A. and A. Sharma: *Agriculture under GATT: What It Holds for India* in EPW, Vol.29, No.29, 1994
6. Ghatak, Subrata and Ken Ingersent (1984): *Agriculture and Economic Development*, Select Book Service Syndicate, New Delhi by arrangement with Harvester Press Ltd., London.
7. Norton, George W. and Jeffrey Alwang (1993): *Introduction to Economics of Agricultural Development*, McGraw-Hill, Inc.
8. Ghatak, Subrata and Ken Ingersent (1984): *Agriculture and Economic Development*, Select Book Service Syndicate, New Delhi by arrangement with Harvester Press Ltd., London.
9. Norton, George W. and Jeffrey Alwang (1993): *Introduction to Economics of Agricultural Development*, McGraw-Hill, Inc.

Course No: 404 Advanced International Economics-II 4 Credits

Module-1. Foreign Exchange Market and Exchange Rate:

Foreign Exchange; Equilibrium Foreign Exchange Rates Arbitrage; Exchange Rate and Balance of Payments; Spot and Forward Rates, Currency Swaps; Future and Options; Foreign Exchange Risk, Hedging and Speculations; Interest

Arbitrage and the Efficiency of Foreign Exchange Markets; Uncovered Interest Arbitrage; Covered Interest Arbitrage - Covered Interest Arbitrage Margin - Efficiency of Foreign Exchange markets; Equilibrium in the Foreign Exchange Market — Interest Parity: The basic Equilibrium condition; Forward Exchange Rate and Covered Interest Parity; Effects of Changes in Current Exchange Rate on Expected Returns; Effects of Changing Expectations on Current Exchange Rate.

Module-2. Price Levels and the Exchange Rate in the Long Run

Purchasing Power Parity theory — Absolute PPP Theory; Relative PPP Theory; Exchange Rate Overshooting ; Concept of Overshooting Dornbusch Model of Exchange — Rate Overshooting ; Time path to a New Equilibrium-Exchange Rate; Beyond PPP : A General Model of Long-Run Exchange Rate ; The Real Exchange Rate; Demand Supply and the Long Run Real Exchange Rate -Nominal and Real exchange; Rate in Long Run Equilibrium.International interest Rate Differences and the Real Exchange Rate; Real Interest Parity.

Module-3. The Monetary and Portfolio Balance Approaches to External Balance

The Monetary Approach to Balance of Payments; The demand for Money; The Supply of Money; Monetary Equilibrium and Balance of Payments.

The Monetary Approach to Exchange Rate; The Monetary Approach under Fixed Exchange Rates; The Monetary Approach to Exchange Rate Determination.

The Portfolio Balance Approach to Exchange Rate; Asset Market Model; Extended Asset Market Model; Portfolio Adjustment and Exchange Rate; The Mundel Fleming Approach; Calvo-Rodriguez – ‘Currency Substitution Model’

Module-4. Open Economy Macroeconomic Policy under Flexible Exchange Rates

Effects of Fiscal Policy under Perfect Capital Mobility; Effects of Fiscal Policy under imperfect

Capital Mobility; Effects of Monetary Policy under perfect Capital Mobility, Policy Coordination Under Flexible

Exchange Rates; Effects of Exogenous shocks in the IS/LM/BP ; Model with perfect Capital Mobility; Effects of Exogenous Shocks on Aggregate; Demand under Flexible Exchange Rate; Effects of Fiscal and Monetary Policies on Aggregate Demand under Flexible Exchange Rates.

Module-5. Optimum Currency Areas

The Theory of Optimum currency Areas ,
Economic Integration and the benefits of a Fixed Exchange Rate Area: The GO Schedule; Economic Integration and the Costs of a Fixed Exchange Rate Area: The LL Schedule; The Decision to Join a Currency Area: Putting the GO and LL Schedules Together; The Idea of Optimum Currency Area.

Module-6. Developing Countries: Borrowing and Debt

The Economics of Borrowing by Developing Countries; Alternative Forms of Capital Inflow; Government and Publicly Guaranteed Borrowers;. The Developing Country: Debt Crisis of 1 980s.Developing countries in the World wide Recession; The Beginning of the Crisis; Managing the Debt Crisis; Renewed Capital Inflows; Possible Solutions to the Debt Problem.

Module -7. International Monetary System: Suggestions for Reforms.

A Return to Gold Standard; A World Central Bank ; The Target Zone proposal; Control on Capital Flows; Greater Stability and Coordination of macroeconomic Policies Across Countries.

References:

1. Appleyard, D.R., and A.J.Field, Jr. (1997): *International Economics* (eds), Irwin McGraw Hill, New York, 1997.
2. Belson, J. and R.C.Monston, eds. (1984): *Exchange Rate Theory and Practice*, University of Chicago Press, Chicago.
3. Bilson, J.F.O. (1978): "The Monetary Approach to Exchange Rate; Some Empirical Evidence", IMF Staff Papers.

4. Branson, W.H (1976): "Portfolio Equilibrium and Monetary Policy with Foreign and Non-trade Assets", in E. Classen and P. Salin, eds. *Recent Issues in International Monetary Economics*, North Holland, Amsterdam.
5. Caluo, U and C. Rodringuez (1977): "A Model of Exchange Rate Determination under Currency substitution and Rational Expectation: *Journal of Political Economy*, 85.
6. Dornbusch, R. (1976): Expectations and Exchange, Rate Dynamics, *JPE*.
7. Einzig, P (1967): *The Dynamic Theory of Foreign Exchange*, Macmillan, London, 1967.
8. Fogoff, K: "The Purchasing Power Parity Puzzle" *Journal of Economic Literature*, June 1996.
9. Frenkel J.A. (1993): "Monetary and Portfolio Balance Models of the Determination of Exchange Rates in J.A.Frenkel, ed., *On Exchange Rates*, MIT Press, Cambridge, M.A.
10. Frenkel, J. and H. Hohnson (1975): *The Monetary Approach to the Balance of payments*; Allen and Unwin, London.
11. Krugman, P.R., and M. Obstfeld (1996): *International Economics: Theory and Policy*, (Edn.), Addison-Wesley, New York.
12. Lothian, JR. and M.P. Taylor (1996): "Real Exchange Behaviour: The Recent Float from the Perspective of the Past Two Centuries".
13. MacDonald R. and M.P. Taylor (1993): "The Monetary Approach to the Exchange Rate: Rational. Expectations, Long Run Equilibrium, and Forecasting" *IMF Staff Papers*.
14. Meles, M.A. (1978): "Currency Substitution, Flexible Exchange Rates and Monetary Independence", *AER*.
15. Musa, M. (1984): "The Theory of Exchange Rate Determination" n JFO Bilson and R.C. Marstons (eds.), *Exchange Rate Theory and Practice*, University of Chicago Press, Chicago.
16. Obstfeld, M. and A.C. Stockman (1995): "Exchange Rate Dynamics" in W. Jones and P.B. Kenneta, eds. *Handbook of International Economics*, Vol. III, Amsterdam North.Holland, pp. 1913-1971.
17. Officer, Lawrence. (1982): *Purchasing Power parity and Exchange Rates, Theory Evidence and Relevance*, MI Press, Inc., Greenwich, CT.
18. Salvatore, D. (1998): *International Economics (6/e)*, Prentice Hall; Upper Saddle Rivei New Jersey.
19. Taylor, M. (1995): "The Economics of Exchange Rates", *Journal of Economic Literature*.

Course No: 405 Econometrics with Computer Applications-II 4 Credits

- Module -1.** Linear Time Series Model and Estimation Procedure
Autoregressive Models-AR(1) And AR(2) Models.
Moving Average Models-MA(1) And MA(2) Models.
Detection of AR And MA Structures, Integration
ARIMA Processes and Properties.
- Module-2.** Stochastic Process and Unit Roots; White-Noise Process.
Stationary and Non-Stationary Processes.
Correlogram-ACF and PACF of any Stochastic Sequence.
Testing For Random Walks (Unit Roots); Dickey-Fuller Tests.
Augmented Dickey-Fuller Tests. Phillips-Peron Test.
- Module-3. Cointegration**
Meaning-Engle-Granger Approach to Cointegration.
Johansen Method of Cointegration.
Cointegrating Vectors and Cointegration Rank.
Cointegration Space-Wald Decomposition Theorem.
- Module-4.** Estimating the Stability of The Long-Run Relationship Between Variables-Short-Run. Dynamics of a Shock. The Vector Error Correction Model.
- Module-5.** System Approach in Time Domain Estimation.
Vector Autoregressive Model-Conditions of Stability-Stability of the Model. Impulse Response Function and Variance Decomposition
- Module-6.** Causal relation Among Variables.
Granger Causality. Sim Causality. Nature and Direction of Causality.
Modeling Economic Time Series: Trends and Volatility: ARCH process, GARCH model, ARCH-M model

References:

1. Walter Enders, (2010), *Applied Econometrics Time Series*”, Wiley India Pvt. Ltd.
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5. Christ, C.F. (1976): *Econometric Models and Methods*, New York W
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Course No: 406 Demography and Human Population Studies 4 Credits

Module-1. Demographic Studies in Economics

Relationships of Population with Economic Development: Population-dependent measures of Economic Development; Economic Determinants of Population Changes: Population, Health, Nutrition and Productivity Nexus: Demographic Transition in India.

Module -2. Methods and Techniques of Demographic analysis

Demographic Rates and Ratios – Person years lived, Crude and Specific Rates, Standardization – Direct and Indirect Methods: Components of Rates. The Choice of Radix,

Population Growth: Measures of Population Composition, Distribution and Growth of Population. Population Growth, Proportionate and Instantaneous Measures — Exponential Growth Rates and Population — Doubling Time — Population Curve- Fitting: Demographic Measurement of Mortality, Morbidity, Fertility and Reproduction- Period and Cohort Measures — Lexis Diagram —

Life Table Techniques —Population Gender — Ratios, General FMR, and Grouped FMR: Age-specific FMR, Measures of Nuptiality. Population Estimation and Projections – Methods of Population estimation and Projection – Mathematical and Cohort Component methods,

Module-3. Models of Population Structure and Model Life Tables

The Age and Sex Structure of Populations in DCs and LDCS: Determinants of Age and Sex Structure: Occupational Structure of the Population: Economic Versus Census Classification of Work — Work Force Participation Rates and Their Interpretation, Aging of Populations: Individual Aging and Population Aging. Economic implication of population ageing, The Demographic Determinants of the Shape of the Population Pyramid: Stable, Stationary and Quasi-Stationary Populations- Fertility, Mortality and the Age Structure in Stable Populations. Intrinsic Rate of Growth-intrinsic Birth and Death Rates- Intrinsic Age Distribution: Momentum of Population Growth: Model Life Tables: UN Model Life Tables: Coale-Demoney Model Life Tables

Module-4. Population Migration and Urbanization

Migration and Urbanization: Economic Theories of Rural-Urban Migration: ‘Incentive’ Theory of Migration: The Harris-Todaro Model and the Informal Sector: Behavioural Theory of Rural Urban Migration: Destitution Theory of Rural Urban Migration — The ‘Dependencia School’. Case-Study of India and one of other Third World Country Concepts in Urban Demography: Slum & Non Slum Population: Classification of Towns: Town Categories — Municipal and Non-Municipal Towns: Urban Agglomerations. Theories of Urbanization:

References:

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Module-1 Households, Families and Work

Unpaid Work: *Conceptual and Measurement Issues*

Module-2 Gender and Poverty

Feminization of Poverty, Time poverty

Module-3 Strategies for Advancing Wellbeing and Overcoming Gender Disparities

Engendering Development Policies and Conclusions;

Conditional Cash Transfers;

Control over Assets.

References:

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