UNIVERSITY OF NORTH BENGAL

Syllabus for Master of Arts in Economics

with effect from academic session 2017-18

(CBCS based)

DEPARTMENT OF ECONOMICS

**NORTH BENGAL UNIVERSITY
RAJARAMMOHUNPUR, DARJEELING
PIN-734013, WEST BENGAL**

UNIVERSITY OF NORTH BENGAL

Syllabus for Master of Arts in Economics (Under CBCS)
with effect from academic session 2017-18

DEPARTMENT OF ECONOMICS
NORTH BENGAL UNIVERSITY
RAJARAMMOHUNPUR, DARJEELING
PIN-734013, WEST BENGAL

Semester 1	Course Code	Title of the Course	Total Marks	Credit
Core/ Compulsory	411	Micro Economic Analysis-I	50	2
	412	Macro Economic Analysis - I	50	2
	413	Quantitative Methods - I	50	2
	414	Basic Econometrics – I	50	2
	415	History of Economic Ideas - I	50	2
	416	Public Economics – I	50	2
	417	Field Work-I & Group Discussion	50	2
	418	Comprehensive Assessment-I	50	2
		Total Marks	**400**	**16**

Semester 2	Course Code	Title of the Course	Total Marks	Credit
	421	Micro Economic Analysis-II	50	2
Core/ Compulsory	422	Macro Economic Analysis - II	50	2
	423	Quantitative Methods - II	40	2
	424	Basic Econometrics – II	35	2
	425	History of Economic Ideas - II	40	2
	426	Public Economics – II	35	2
	427	Tutorial & viva voce	50	2
	428	Comprehensive Assessment-II	50	2
		Total Marks	**400**	**16**

Semester 3	Course Code	Title of the Course	Total Marks	Credit
Core/ Compulsory	531	Economic Growth and Globalization	**50**	**2**
	532	Economics of Development & Infrastructural Policies	**50**	**2**
	533	Field Work-II & Group Discussion	**50**	**2**
	534	Comprehensive Assessment-III	**50**	**2**
Special/Optional Course (*Each student shall opt for two special courses out of the following four special courses*)	5351	Agricultural Economics – IA	**50**	2
	5352	Agricultural Economics – IB	**50**	**2**
	5353	Advanced International Economics-IA	**50**	**2**
	5354	Advanced International Economics-IB	**50**	**2**
	5355	Natural Resource and Environmental Economics – IA	**50**	**2**
	5356	Natural Resource and Environmental Economics – IB	**50**	**2**
	5357	Econometrics with Computer Applications – IA	**50**	**2**
	5358	Econometrics with Computer Applications – IB	**50**	**2**
		Total Marks	**400**	**16**

Semester 4	Course Code	Title of the Course	Total Marks	Credit
Core/ Compulsory	541	Economic Growth and Globalization	50	2
	542	Economics of Development & Infrastructural policies	50	2
	543	Term Paper & Viva voce	50	2
	544	Comprehensive Assessment-IV	50	2
Special/Optional Course (*Each student shall opt for two special courses out of the following four special courses*)	5451	Agricultural Economics – IIA	50	2
	5452	Agricultural Economics – IIB	50	2
	5453	Advanced International Economics-IIA	50	2
	5454	Advanced International Economics-IIB	50	2
	5455	Natural Resource and Environmental Economics – IIA	50	2
	5456	Natural Resource and Environmental Economics – IIB	50	2
	5357	Econometrics with Computer Applications – IA	50	2
	5358	Econometrics with Computer Applications – IB	50	2
		Total Marks	**400**	**16**

DEPARTMENT OF ECONOMICS

NORTH BENGAL UNIVERSITY

Course Structure - Master of Arts in Economics

Distribution of Marks

Total Marks - 1600 (Total no. of courses 32) – 64 credits
End Semester Examination – 1200 marks

Internal Assessment – 400 marks

1st Semester

(All courses are compulsory)

411. Micro economic Analysis - I (50 marks): 2 credits
412. Macro economic Analysis - I (50 marks) : 2 credits
413. Quantitative Methods - I (50 marks) : 2 credits
414. Basic Econometrics – I (50 marks) : 2 credits
415. History of Economic Ideas - I (50 marks) : 2 credits
416. Public Economics – I (50 marks) : 2 credits
417. Field Work–I & Group Discussion (50 marks) : 2 credits
418. Comprehensive Assessment -I (50 marks) : 2 credits

2nd Semester

(All courses are compulsory)

421. Micro economic Analysis - II (50 marks): 2 credits
422. Macro economic Analysis - II (50 marks) : 2 credits
423. Quantitative Methods -II (50 marks) : 2 credits
424. Basic Econometrics – II (50 marks) : 2 credits
425. History of Economic Ideas -II (50 marks) : 2 credits
426. Public Economics – II (50 marks) : 2 credits
427. Tutorial & viva voce (50 marks) : 2 credits
428. Comprehensive Assessment -II (50 marks) : 2 credits

3rd Semester

(Compulsory Courses)

531. Economic Growth & Globalisation – I (50 marks) : 2 credits
532. Economics of Development & Infrastructural Policies – I (50 marks) : 2 credits
533.   Field Work –II & Group Discussion (50 marks) : 2 credits
534. Comprehensive Assessment -III (50 marks) : 2 credits

Special Courses

(Each student shall opt for two special papers out of the following four special courses)

5351.   Agricultural Economics - IA (50 marks) : 2 credits
5352.   Agricultural Economics - IB (50 marks) : 2 credits
5353.   Advanced International Economics - IA (50 marks) : 2 credits
5354.   Advanced International Economics - IB (50 marks) : 2 credits
5355.   Natural Resource and Environmental Economics – IA (50 marks) : 2 credits
5356.   Natural Resource and Environmental Economics – IB (50 marks) : 2 credits
5357.   Advanced Econometrics – IA (50 marks) : 2 credits
5358.   Advanced Econometrics – IB (50 marks) : 2 credits

4th Semester

(Compulsory Courses)

541. Economic Growth & Globalisation – II (50 marks) : 2 credits
542. Economics of Development & Infrastructural Policies – II (50 marks) : 2 credits
543. Term Paper & viva voce - (50 marks) : 2 credits
544. Comprehensive Assessment -IV (50 marks) : 2 credits

Special Courses

(To be continued as in semester III)

5451.   Agricultural Economics – IIA (50 marks) : 2 credits
5452.   Agricultural Economics – IIB (50 marks) : 2 credits
5453.   Advanced International Economics – IIA (50 marks) : 2 credits
5454.   Advanced International Economics – IIB (50 marks) : 2 credits
5455.   Natural Resource and Environmental Economics – IIA (50 marks) : 2 credits
5456.   Natural Resource and Environmental Economics – IIB (50 marks) : 2 credits
5457.   Advanced Econometrics– IIA (50 marks) : 2 credits
5458.   Advanced Econometrics– IIB (50 marks) : 2 credits

SEMESTER – I

Course 411: Micro economic Analysis - I

Module 1 Consumer Choice and Advanced Utility Theory (6 Hours)

Preference & Choice: Preference Relations and Utility, Choice Rule and Optimal Choice, Demand Functions and Comparative Statics, Demand, Indirect Utility, and Expenditure Function, Indirect Utility Function, Roy's Identity, Hicksian and Walrasian

Demand Function: Compensating & Equivalent Variation, Slutsky equation and Intertemporal Choice, Expenditure function, Comparative Statics of Expenditure Function.

Revealed Preference: Axioms of Revealed Preferences, Substitution Effect

Demand Behaviour: Endowments in the Budget Constraint, Income-Leisure Trade – Off, Homogeneous and Homothetic Utility Function, Aggregating Across Goods, Aggregating Across Consumers.

Module 2 Theory of Games and Economic Behaviour(6 Hours)

Cooperative us Non-cooperative Games, Extensive Form Representation of a Game, Strategies and the Normal Form Representation of a Game; Simultaneous Move Games – Dominant and Dominated Strategies, Nash Equilibrium Game of Incomplete Information: Bayesian Nash Equilibrium. Dynamic Game – Sequential, Backward Induction and Sub-game Perfection, Beliefs and Sequential Rationality, Reasonable Beliefs and Forward Induction

Module 3 Foundations of Axiomatic Economic Theory – Interpretations of Linear Economic Space, Sets & Mapping – Consequences of Production Externalities – Theoretical Conditions for Linearity and Set Convexity – Primary Versus Secondary Axioms in Production Theory (6Hours)

Module 4 The Axiomatic Model of Production in Outline – Statements and Interpretations of Production Axioms – Additivity and Convexity Conditions in Linear Production – Technological Attainability and the Production Domain – Axiom-sets for Linear and Non-Linear Production - Interior and Boundary Properties of Production Sets – Axiomatic Interpretation of Production Efficiency – Projective Spaces and Polyhedral Production Sets (6 Hours)

Module 5 Profit Optimisation in Axiomatic Production Models – Profit Hyperplanes, Production Sets and Economic Duality – Dual Price Cones – Determinacy and Indeterminacy of Production Equilibria – Producer's Choice: Pure and Mixed Production Strategies (6 Hours)

Module 6 Production Limitations imposed by Linear Technology – Input Substitutability in the Linear Production Models (6 Hours)

Readings:

- Aumann (1974): "Subjectivity and Correlation in Randomized Strategies", *Journal of Mathematical Economics* (1): 67-96.
- Jeffrey, M. Perloff (1999): *Microeconomics*, Addison-Wesley.

- Gravelle, H. & R. Rees (1981): *Microeconomics,* Longman, London.
- Hal R Varian - Intermediate Microeconomics - A Modern Approach, W.W. Norton & Co
- Hal R Varian - Microeconomic Analysis, W.W. Norton & Co
- Kreps, D. (1984): *Signaling Games and Stable Equilibrium*, Mimeo.
- Mansfield, E. (1997): *Microeconomics* (9th Edition), W.W. Norton and Company, New York.
- Mas-Collel, Andreu, Michael D. Whinston and Jenry R Green (2007): *Microeconomic Theory*, OUP, New Delhi.
- Nash, J.F. (1951): "Non-Cooperative Games", *Annals of Mathematics* 54: 289-95.
- Osborne, Martin J. (2004): *An Introduction to Game Theory*, OUP, New York.
- Rosenthal, R. (1981): "Games of Perfect Information, Predatory Pricing and the Chain-Store Paradox", *Journal of Economic Theory* 25: 92-100.
- R Shone - Microeconomics - A Modern Treatment, Academic Press
- Salvatore, Dominick (2002): *Microeconomic Theory and Applications*, Oxford University Press.
- Schelling, T. (1960): *The Strategy of Conflict*, Cambridge Mass: Harvard University Press.

Course 412 : Macro economic Analysis - I

Module 1 Macro-economy and its Problems (3 Hours)

Major macroeconomic issues--- Major schools of thought in macroeconomics---Macroeconomic stability and policy effects

Module 2 Early Keynesian Approach Revisited (6 Hours)

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--- Keynesian Economics and underdeveloped countries.

Module 3 Monetarist Counter-Approach (3 Hours)

Genesis of monetarism**-----**Friedman's restatement of the Quantity theory of money---Basic features of monetarism----the natural rate theory--- Keynesian vs. monetarist policy prescriptions.

Module 4 Disequilibrium macroeconomics (6 Hours)

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.

Module 5 Essays in Monetary Theory: The Two Triads – Sir John Hicks Lectures I, II, III (12 Hours)

Module 6 Theory of Money Supply, The H Theory of Money Supply, The Money Multiplier Process, Determinants of the Money Multiplier, Factors Affecting H, Adjusted H – H as an Autonomous Policy-determined Variable (3 Hours)

Module 7 An Overview of the Financial System, Function of Financial Markets, Debt and Equity Markets, Money and Capital Markets, Function of Financial Intermediaries (3 Hours)

Readings:

- Patinkin,D. (1965), *Money, Interest and Prices*
- Clower, R. W. (ed.) (1970), *The Keynesian Counter Revolution : A Theoretical Appraisal*.
- Barro, R.J. and H.I Grossman (1971), 'A General Disequilibrium Model of Income and Employment', *American Economic Review*,Vol.61
- Dornbusch, R. And S. Fisher, *Macroeconomics* (3/e)
- Abel, A.B. And B.S. Bernake, *Macroeconomics* (4/e)
- Froyen, R.T. (1993), *Macroeconomics: Theories and Policies*
- Sikdar, S. (2006), *Principles of Macroeconomics*
- Ghosh, C. and A. Ghosh (2011), *Macroeconomics*
- Friedman, M. (1968), 'The Role of Monetary Policy' *in American Economic Review*,Vol.58
- Modigliani, F. (1977), 'The Monetarist Controversy or, Should We Forsake Stabilization Policies' in *American Economic Review*, Vol. 69
- Ascheim, J. and C.Y. Hsieh (1976), *Macroeconomics: Income and Monetary Theory,* Merrill Publishing Company, Columbus, Ohio
- Cagan, P. *Determinants and Effects of Changes in the Stock of Money, 1875-1960,* Columbia University Press, New York, Ch 4,5
- Culbertson, J.M. (1965), "The Interest Rate Structure: Toward Completion of the Classical System" in F.H. Hahn and FPR Brechling (eds.), *The Theory of Interest Rates,* Macmillan, London
- Harris, L. (1985), *Monetary Theory,* McGraw Hill, New York
- Malkiel, BG (1980), :The Term Structure of Interest Rates: Theory, Empirical Evidence and Applications" in TM Havrilesky and TJ Boorman (eds.) *Current Issues in Monetary Theory and Policy,* (2nd Edition), Harry Davidson, Arlington Heights, Illinois
- Meeselman, D. (1962), *The Term Structure of Interest Rates,* Prentice Hall, N.J.
- Mishkin, FS (1989), *The Economics of Money, Banking and Financial Markets (2*nd *ed),* Scott, Foresman and Company, Glenview, Illinois
- Teigen, RL (1964), "The Demand for and Supply of Money" in Smith, W.L. (eds.), *Readings in Money, National Income and Stabilisation Policy,* Irwin Inc., Homewood, Illinois
- Tobin, J. (1956), "The Interest Elasticity of Transactions Demand for Cash", *Review of Economics and Statistics,* Vol. XXXVIII, Aug.
- Tobin, J. (1958), "Liquidity Preference as Behaviour Towards Risk", *Review of Economics Studies,* Vol. XXV, No.2, Feb.
- Turvey, R. (1960), *Interest Rates and Asset Prices,* Macmillan, New York
- Van Home, JC (1984), *Financial Market Rates and Flows,* Prentice Hall, NJ
- Gupta, SB (1995), *Monetary Economics: Institutions, Theory and Policy,* S Chand and Co., New Delhi
- Weller, P (1992), *The Theory of Future Markets,* Blackwell, Oxford
- White, WR and JP Burman (1974), "The Term Structure of Interest Rates-A Cross Section of Test of Mean-Variance Model", in Johnson, HG and AR Norbey (eds.) *Issues in Monetary Economics,* OUP, Oxford

Course 413: Quantitative Methods – I

Module1 Introduction to mathematical preliminaries: Real-valued, concave and quasiconcave functions; Matrices: Negative (semi) definiteness and other properties; Continuous functions and compact sets; Convex sets, hyperplanes, and halfspaces: separating and supporting hyperplanes. (14 Hours)

Module2 Static Optimization: Sign definiteness of quadratic forms, Eigenvalues and Eigenvectors; Existence of Optima− the Weierstrass' theorem and Fixed-point Theorems; Unconstrained Optimization; Optimization with (a) Equality Constraints (b) Inequality Constraints− Lagrange's Method and the Kuhn-Tucker Conditions; (14 Hours)

Module3 Comparative statics − the value function, Envelope Theorem and Duality− Economic applications. (8 Hours)

Readings:

- Beavis & Dobbs (1990), Optimization and Stability Theory for Economic Analysis, CUP
- Chiang and Wainwright (2005), Fundamental Methods of Mathematical Economics, McGraw-Hill.
- Dixit, A.K (1990), Optimization in Economic Theory, OUP.
- Gravelle, H and R Rees (1992), Microeconomics, Pearson Education
- Hoy, et al. (2001), Mathematics for Economics, Prentice-Hall.
- Intrilligator (1971), Mathematical Optimization and Economic Theory, Prentice Hall
- Mas-Colell, A., M. Whinston and J. Green (1995), Micro-economic Theory−Mathematical Appendices, OUP
- Silberberg, E. and W. Suen (2000), The Structure of Economics: A Mathematical Analysis, McGraw-Hill.
- Simon, C.P. and L. Blume (1994), Mathematics for Economists, Norton
- Sundaram, R.K. (1996), A First Course in Optimization Theory, CUP
- Varian, H. R (1992), Micro-economic Analysis, W.W. Norton & Co. NY

Course 414: Basic Econometrics – I

Module 1 Introduction

Collection of Data: Primary Data, Secondary Data, Various Methods of Collection of Primary Data, Census and Sample of Data, Various Sampling Techniques, t, Chi Square and F Distribution (9Hours)

Module 2 Classical Linear Regression Model

What is a Regression Model, Regression versus Correlation, Simple Regression, The Assumption underlying the Classical Linear Regression Model, Properties of OLS estimator, an introduction to Statistical inference. (9 Hours)

Module 3 Further Development and Analysis of the Classical Linear Regression Model

Generalising the Simple model to Multiple Linear Regression Model, The Constant term, how are the Parameters calculated in the generalized case? Testing multiple hypothesis: the F-test, Goodness of fit statistics (9 hours)

Module 4 Autocorrelation (9 Hours)

The nature of the Problem, OLS estimation in the presence of Autocorrelation, The BLUE Estimator in the presence of autocorrelation, Detection of Autocorrelation, Remedial Measures

Readings:

- Gujarati, D.N. (2003), Basic Econometrics, 4th Edition, Tata-MaGraw-Hill,
- Wooldridge, J.M. (2008), Introductory Econometrics-A Modern Approach.3rd Edition, India Edition
- Koutsoyiannis, A. (2nd Edition) Theory of Econometrics (2nd Edition),Oxford University Press
- Ramanathan, R. (2002), Introductory Econometrics with Applications (5th Edition), Cengage Learning India Private Limited
- Maddala, G.S. (2002), Introduction to Econometrics (3rd Edition), John Wiley & Sons Ltd.

Course 415: History of Economic Ideas – I

Module 1 History of economic thought: Introduction; Methodological Approach; Aim, Objectives and Importance; Overview of ancient and medieval economic thought: Occidental and Oriental; Mercantilism: Power Versus Plenty in Mercantilism; Mercantilist as Protectionist and Monetary System; Theory of Growth and Employment; Mercantilism and Underdeveloped Nations; Physiocracy; Social Philosophy; Economic Analysis; Quesnay's Tableau Economique; Economic Growth and Economic Policy; Physiocrats and Underdeveloped Nations. (10 Hours)

Module 2 Classical Economics: Overview of Classical Economics; Classical Theory of Growth and Under developed Countries; Adam Smith: As Father of Economics; The Philosophy of Naturalism and Optimism and its Practical Implications; The Doctrine of Laissez-faire; The Theory of Economic Growth; The Theory of Distribution; T. R Malthus: The Principle of Population; The Principle of Effective Demand; Theory of Growth; David Ricardo: The Economic Method; The Theory of Distribution; Profits and the Fundamental Theorem of Distribution; The Theory of Growth; The Theory of Value- Search for an Invariable Measure; On International Trade- The Theory of Comparative Cost; On Economic Policy; J.S Mill: The Economic Method; Political Philosophy and Economic Policy- Utilitarianism, Economic Role of Government; The Principles of Political Economy-Laws of Production and Distribution; The Theory of Growth- Production of Wealth; Mill and Underdeveloped Countries.(10 Hours)

Module 3 Reaction against Classical Economics: Historical and Social Critics: German Historical School- Critical Ideas of Historical School; Concept of Nationalism and Theory of Economic Development; The Historical view of Economic Theory; The Prophet of Industrialism; Collectivism; Utopian Socialists; Criticism of Competition; The Exchange Bank.(10 Hours)

Module 4 Karl Marx : Marxian Philosophy- Dialectical Materialism; Historical Materialism; Mode of Production; The Labour Theory of Value- Determination of Exchange value; The Theory of Surplus Value-Rate of Surplus Value; The Theory of Prices of the Transformation Problem; The Theory of Development; Immiserization of Proletariat and Wage Theory; The Falling Rate of Profit; The Reproduction Schema.

(6 Hours)

Readings:

- Backhaus, J.G (ed.)., Handbook of the History of Economic Thought
- Blaug, Mark., Economic Theory in Retrospect
- Canterberry, E.R., A Brief History of Economics, Artful Approaches to the Dismal Science
- Coats, A.W., The Historicist Reaction in English Political Economy, 1870-1890',

- Cole, G.D.H., A History of Socialist Thought, Vol. I.
- Dobb, M., Theories of Value and Distribution Since Adam Smith
- Ekelund, R.B. and Herbert, R.F., A History of Economic Theory and Method
- Grossman, H., 'The Evolutionist Revolt against Classical Economics'. Journal of Political Economy, October and December 1943.
- Guide, C. and Rist, C., A History of Economic Doctrine
- Heckscher, E.F., Mercantilism
- Heilbroner, R., Worldly Philosophers (1972)
- Heney, L. H., History of Economic Thought
- Jackson, J.H., Marx, Proudhon and European Socialism.
- Jevon, W.S., Theory of Political Economy
- Keynes, J.M., General Theory of Employment, Interest and Money.
- Malthus, T.R., An Essay on the Principle of Population as it Affects the Future Improvement of the Society, with Remarks on the Speculations of Mr. Godwin, Mr. Condercet and Other Writers
- Marshall, A., Principles of Economics
- Marx, K., Capital
- Mill, J.S., Principle of Political Economy
- Medema, S.G. and Samuels, W.J. (ed.)., The History of Economic Thought: A Reader
- Menger, C., Principles of Economics
- Negishi Takasha., History of Economic Theory
- Ricardo, D., The Principles of Political Economy and Taxation
- Roll Eric., A History of Economic Thought
- Roncaglia, Alessandro., The Wealth of Ideas A History of Economic Thought
- Schumpeter, J. A., History of Economic Analysis
- Screpanti, E. and Zamagri, S., An Outline of the History of Economic Thought
- Smith, A. An Inquiry into Nature and Causes of Wealth of Nation
- Spiegel, H. W., The Growth of Economic Thought (1971)
- Tsoulfidis Lefteris., Competing Schools of Economic Thought

Course 416: Public Economics – I

Module 1 Theory of Government Intervention (9 Hours)

Economic Rationale of the Modern Government; Welfare Economics and Governmental Intervention – View of the State; Changing Perspective – Government in a Mixed Economy; Public, Private and Merit Goods - Theory of Public Goods

Module 2 Externalities and the Role of the Government (8 Hours)

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

Module 3 Public Expenditure (10 Hours)

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 - Service Environment - Quality of Publicly Supplied Goods - The Price of Public Sector Inputs; Tax Equity and Efficiency – Evaluation of Benefit and Ability to Pay Theories of Taxation

Module 4 Mechanics of Budget (9 Hours)

Budget Terms and Budget Concepts - Importance, Objective and Modern Classification of Budget - Types of Budget; Different Concepts of Budget Deficit; Budgetary Trend and Policy in India; Analysis of the Latest Central Government Budget in India

Readings:

- Atkinson, A. and J. Stiglitz (1980): *Lectures on Public Economics*, MIT Press.
- Basu, Kaushik (1991): "Markets, Power and Social Norms" in *Economic Graffitti: Essays for Everyone*, Bombay, Oxford.
- Brown, C. V. and P. M. Jackson (1982): *Public Sector Economics*, Martin Robertson, Oxford. [4/e, Blackwell, 1996]
- Due, John F. and Ann F. Friedlander (PB Indian edition 1997): *Government Finance: Economics of the Public Sector*, AITBS Publishers & Distributors (Regd.), Delhi.
- Feldstein, Martin (2001): *The Transformation of Public Economics Research: 1970-2000*. NBER website.
- Government of India (various years): *Economic Survey*, Ministry of Finance, New Delhi.
- Laffont, Jean-Jacques (1989): *Fundamentals of Public Economics*, Boston, MIT.
- Mithani, D. M. (1993): *Principles of Public Finance and Fiscal Policy*, Himalaya Publishing House, Bombay.
- Mundle, S. (1999): *Public Finance Policy: Issues for India*, Oxford University Press, Delhi.
- Rosen, Harvey S. and Ted Gayer (2007): *Public Finance*, (8/e), McGraw-Hill Irwin.
- Tanzi, Vito and Ludger Schuknecht (2000): *Public Spending in the 20th Century: A Global Perspective*, Cambridge University Press. Chap I, pp.3-22.

SEMESTER – II

Course 421: Micro economic Analysis - II

Module 1 Economics of Market Structure (6 Hours)

Review of alternative Market Structures Monopoly, Discriminating Monopoly-1st, 2nd and 3rd price Discrimination, Multiplan Monopoly, Non-Monopoly Cooperative Oligopoly Models, Cournot Model of Non-cooperative Behaviour, Stackelberg Model of Non-cooperative Behavior, Pricing – Bertrand

Equilibrium with Identical and Differentiated Products, Price Discrimination – means of Monopoly power & means of Concentration.

Module 2 Uncertainty and Risk (6 Hours)

Choice under Uncertainty: Expected Utility Theory – objects of choice and prospect preference, Axiom of expected utility, Money lotteries and risk aversion, Risk aversion and preference, relation – Arrow-Pratt comparative risk aversion, Rothschile – Stilitz comparative risk aversion

Risk aversion – risk premium, indices of risk aversion, absolute risk aversion, global risk aversion, relative risk aversion, demand for insurance, decision making under uncertainty, investment under uncertainty, comparative statics under uncertainty.

Module3 Economic Agents and Collective Economic Society – Positive and Normative Economics – Welfare Allocations under Non-Satiety – Formulation of Individual and Social Welfare – Microeconomic Aspects of Social Choice – Social Choice under Democracy – Paternalistic versus Benign State (4 Hours)

Module 4 Strong and Weak Value Judgments & Economic Inclusiveness – Hierarchical Social Choices under Dictatorial/ Majority / Unanimity Rules – Arrow's 'Ethical' Postulate for Social Choice and the Pareto Ranking (4 Hours)

Module 5 Completeness/ Incompleteness and Consistency in Social Choice Rankings – Pareto Comparability/ Noncomparability and Pareto Optimality – Ethical Implications of Pareto Rankings for Social Inclusion and Exclusion in Decision-making (4 Hours)

Module 6 Social Decision Systems – Condorcet's Paradox & Cyclical Social Ordering – Alternative Voting Principles: Simple Majority versus Proportional Voting Systems- Impact of Information Asymmetry(4 Hours)

Module 7 Social Welfare Distributions – Competitive Equilibria and Market Failure – Inconsistent Social Choice – Arrow's 'Impossibility' Theorem – Statement, Lemmas & Proofs of the Theorem – Reconciliability of Interpersonal Welfare Comparisions- Informational Broadening and Capabilities – Contributions of Harsanyi and Amartya Sen – Social Welfare Foundations of the 'Human Development' Concept (4 Hours)

Module 8 Pigou-Robbins Social Welfare Controversy – Economic Inequalities and Welfare Loss-Compensation Criteria for Welfare Redistribution: Kaldor, Hicks and Scitovsky – Principles Theories of Social Justice – Sen's Principle of Reciprocal Justice – Rawlsian Theory of Distributive Justice – Intra – and Inter-generational Equity and Distributive Justice (4 Hours)

Readings:

- Akerlof, George A. (1970): "The Market for Lemons: Quality Uncertainty and the Market Mechanism", *Quarterly Journal of Economics* 84 (3), August 1970: 488-500.
- Chipman, J. and J. Moore (1980): "Compensating Variation, Consumer Surplus and Welfare", *American Economic Review* 70: 933-48.
- Dixit, Avinash K. and Robert S. Pindyck (1994): *Investment under Uncertainty*, Princeton, N.J., Princeton University Press.
- Gravelle, H. & R. Rees (1981): *Microeconomics,* Longman, London.
- Hicks, J. (1939): *Value and Capital,* Clarendon Press, Oxford.
- Jeffrey, M. Perloff (1999): *Microeconomics*, Addison-Wesley.

- Mansfield, E. (1997); *Microeconomics* (9th Edition), W.W. Norton and Company, New York.
- Marshall, A. (1920): *Principles of Economics*, Macmillan, London.
- Mas-Collel, Andreu, Michael D. Whinston and Jenry R Green (2007): *Microeconomic Theory*, OUP, New Delhi.
- Neumann, John von and Oscar Morgenstern (1944): *Theory of Games and Economic Behaviour*, Princeton, N.J., Princeton University Press.
- Pindyck, Robert S. and Daniel L. Rubinfeld (2003): *Microeconomics* (5th Edition), Pearson Education, New Delhi.
- Salvatore, Dominick (2002): *Microeconomic Theory and Applications*, Oxford University Press
- Sen, Anindya (1999): *Microeconomics: Theory and Applications,* OUP, Delhi.
- Spence (1974): Market Signaling, Cambridge, Harvard University Press.
- Varian, Hal R. (2000): Microeconomic Analysis, New York, W.W. Norton.
- Frank A. Cowell (2006): Microeconomics Principles and Analysis, Oxford University Press.
- Andreu Mas-Colell, Michael D Whinston, Jerry R Green – Microeconomic Theory, OUP
- R Shone - Microeconomics - A Modern Treatment, Academic Press
- Hal R Varian - Intermediate Microeconomics - A Modern Approach, W.W. Norton & Co
- Hal R Varian - Microeconomic Analysis, W.W. Norton & Co

Course 422: Macroeconomic analysis – II

Module 1 Expectations Theories and macroeconomics (4 Hours)

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---A simple formal model of Rational Expectations--- Critical evaluation of Rational expectations.

Module 2 New Classical Directions (4 Hours)

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 (6 Hours)

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---Rigidities in interest rates and credit rationing.

Module 4 Open Economy macroeconomics (4 Hours)

Mundell-Fleming Model---- Monetary and Fiscal Policy in an open economy----- Fixed vs. flexible exchange rates----insulation of the economy from foreign shocks under flexible exchange rates

Module 5 Understanding Interest Rates – A Simple Approach to Portfolio Choice: The Theory of Asset Demand – The Behaviour of Interest Rates (4 Hours)

Module 6 The Risk and Term Structure of Interest Rates – Yield Curves – Expectations Hypothesis – Segmented Market Theory – Preferred Habitat Theory – Interpreting Yield. Curves (4 Hours)

Module 7 An Economic Analysis of Financial Structure – How Transactions Costs Influence Financial Structure – Asymmetric Information – Adverse Selection – Moral Hazard – How Moral Hazard affects the Choice between Debt and Equity Market – Principal-Agent Problem – Solutions (10 Hours)

Readings:

- Froyen, R.T. (1993), *Macroeconomics-Theories and Policies*.
- Begg, D.K.H, *The Rational Expectations Revolution in Macroeconomics Theories and Evidence*
- Sikdar,S.: (2006), *Principles of Macroeconomics*
- Ghosh, C. and A. Ghosh (2011), *Macroeconomics*
- Mankiw, N.G. (2002), *Macroeconomics.*
- Plosser, C. (1989), Understanding Real Business Cycles in *Journal of Economic Perspectives (Summer)*
- Gordon, R.T. (1990), 'What Is New Keynesian Economics?' in *Journal of Economic Literature*.
- Ascheim, J. and C.Y. Hsieh (1976), *Macroeconomics: Income and Monetary Theory,* Merrill Publishing Company, Columbus, Ohio
- Cagan, P. *Determinants and Effects of Changes in the Stock of Money, 1875-1960,* Columbia University Press, New York, Ch 4,5
- Culbertson, J.M. (1965), "The Interest Rate Structure: Toward Completion of the Classical System" in F.H. Hahn and FPR Brechling (eds.), *The Theory of Interest Rates,* Macmillan, London
- Harris, L. (1985), *Monetary Theory,* McGraw Hill, New York
- Malkiel, BG (1980), :The Term Structure of Interest Rates: Theory, Empirical Evidence and Applications" in TM Havrilesky and TJ Boorman (eds.) *Current Issues in Monetary Theory and Policy,* (2nd Edition), Harry Davidson, Arlington Heights, Illinois
- Meeselman, D. (1962), *The Term Structure of Interest Rates,* Prentice Hall, N.J.
- Mishkin, FS (1989), *The Economics of Money, Banking and Financial Markets (2*nd *ed),* Scott, Foresman and Company, Glenview, Illinois
- Teigen, RL (1964), "The Demand for and Supply of Money" in Smith, W.L. (eds.), *Readings in Money, National Income and Stabilisation Policy,* Irwin Inc., Homewood, Illinois
- Tobin, J. (1956), "The Interest Elasticity of Transactions Demand for Cash", *Review of Economics and Statistics,* Vol. XXXVIII, Aug.
- Tobin, J. (1958), "Liquidity Preference as Behaviour Towards Risk", *Review of Economics Studies,* Vol. XXV, No.2, Feb.
- Turvey, R. (1960), *Interest Rates and Asset Prices,* Macmillan, New York
- Van Home, JC (1984), *Financial Market Rates and Flows,* Prentice Hall, NJ
- Gupta, SB (1995), *Monetary Economics: Institutions, Theory and Policy,* S Chand and Co., New Delhi
- Weller, P (1992), *The Theory of Future Markets,* Blackwell, Oxford
- White, WR and JP Burman (1974), "The Term Structure of Interest Rates-A Cross Section of Test of Mean-Variance Model", in Johnson, HG and AR Norbey (eds.) *Issues in Monetary Economics,* OUP, Oxford

Course 423: Quantitative Methods – II

Module1 Differential Equations, Stability Theory, Phase Diagrams. (12 Hours)

Module2 Elements of Dynamic Optimization: Optimal Control Theory− the Pontriyagin Maximal Principle− Fixed and variable endpoint problems− dealing with Different Types of Transversality

Condition− Finite and infinite horizon problem− Autonomous optimal control problems with examples in Economics. (12 Hours)

Module3 Game Theory− Noncooperative games− Static and dynamic games under complete information− Concepts of Nash equilibrium and subgame perfection− Repeated games − Static and dynamic games of incomplete information− Bayesian Nash equilibrium and perfect Bayesian equilibrium. (12 Hours)

Readings:

- Aliprantis, C.D. and S.K. Chakrabarti (1999): Games and Decision Making, OUP.
- Binmore, K. G (1992): Fun and Games: A Text on Game Theory, D.C. Heath.
- Chiang, A.C (1992): Dynamic Optimization, McGraw-Hill.
- Dowling, E. T (2007): Introduction to Mathematical Economics, Schaum's Outlines, McGraw-Hill.
- Fudenberg, D. and J. Tirole (1991): Game Theory, MIT Press.
- Gibbons, R (1992): Game Theory for Applied Economists, Princeton University Press.
- Gravelle, H and R Rees (2004): Microeconomics, Pearson Education.
- Kamien & Schwartz (1981): Dynamic Optimization, North Holland.
- Mukherjee, Anjan and Subrata Guha (2011): Mathematical Methods and Economic Theory, OUP.
- Osborne, Martin, J. (2004): An Introduction to Game Theory, OUP.
- Oz Shy (1997): Industrial Organization-Theory and Applications, MIT Press.
- Tirole, J (1988): Theory of Industrial Organization, Appendix on Game Theory, MIT Press.

Course 424: Basic Econometrics - II

Module 1 Problems of Multicollinearity and Heterosecdasticity (10 Hours)

The nature of Multicollinearity, Estimation in the presence of Perfect Multicollinearity, Practical Consequences of Multicollinearity, Detection of Multicollinearity, Remedial Measures, The Nature of Heteroscedasticity, OLS Estimation in the Presence of Heteroscedastricity, Consequences in the Presence of Heteroscedasticity, Detection of Heteroscedasticity, Remedial Measures

Module 2 Errors in Variables (10 Hours)

Plausibility of the assumption of no measurement errors, Consequences of the violation of the assumption of no errors of measurement, testing for errors in the repressors, solutions for the case of errors in variables

Module 3 Analysis of Variance (10 Hours)

Introduction, The Method of analysis of Variance as a statistical method, Regression analysis ad analysis of Variance- A comparison

Module 4 Maximum Likelihood Estimation (6 Hours)

Introduction to the method of Maximum Likelihood , the Maximum likelihood principle as applied to a simple linear Regression Model

Readings:

- Gujarati, D.N. (2003), Basic Econometrics, 4th Edition, Tata-MaGraw-Hill,
- Wooldridge, J.M. (2008), Introductory Econometrics-A Modern Approach.3rd Edition, India Edition
- Koutsoyiannis, A. (2nd Edition) Theory of Econometrics (2nd Edition),Oxford University Press
- Ramanathan, R. (2002), Introductory Econometrics with Applications (5th Edition), Cengage Learning India Private Limited
- Maddala, G.S. (2002), Introduction to Econometrics (3rd Edition), John Wiley & Sons Ltd.

Course 425: History of Economic Ideas - II

Module 1 Alfred Marshal: Economic Science and Economic Policy- Substance and Method of Economics; On Value and Distribution- The General Principle of Demand and Supply; Utility and Demand; Cost and Supply; The Theory of Distribution; Importance of Time Element; Tools of Analysis- Consumer's Surplus, Elasticity, Internal and External Economies; Stanley Jevons; The Theory of Value; Utility theory; Theory of Exchange; Theory of Labour; Karl Menger; Economic Good and Valuation Process; The Equi-marginal Principle; Imputation and Factor Values; Price Series and Index Numbers; Leon Walras: Development of General Equilibrium Analysis; Excess Demand Function; Backward Bending Supply; Market Stability; General Equilibrium in Consumption and Walras's Law; Pareto and Walras.(18 Hours)

Module 2 Austrian School of Economics; Friedrich von Wieser; Value Theory; The Antinomy of Value; Weiser's Theory of Imputation; Welfare Theory; Eugen von Bohm- Bawerk: Subjective value and Exchange; Capital Theory; Interest Rate.(6 Hours)

Module 3 John Maynard Keynes: Major Theoretical Ideas of The General Theory- Effective Demand; Consumption Function or the Psychological Law of consumption; The Multiplier; Investment Function; The Theory of Interest; Business Cycle; Keynesian Model; Attack on Classical Economics; Neo-classical counter attack; Keynesian counter-revolution Keynes and the Underdeveloped countries.(8 Hours)

Module 4 Institutionalism: Features of Institutional Economics; Veblen's Positive Analysis; Theory of Leisure Class; Conspicuous Consumption; Economic Change, Capitalism and The Future.(4 Hours)

Readings:
- Backhaus, J.G (ed.)., Handbook of the History of Economic Thought
- Blaug, Mark., Economic Theory in Retrospect
- Canterberry, E.R., A Brief History of Economics, Artful Approaches to the Dismal Science
- Ekelund, R.B. and Herbert, R.F., A History of Economic Theory and Method
- Guide, C. and Rist, C., A History of Economic Doctrine
- Heney, L. H., History of Economic Thought
- Jevon, W.S., Theory of Political Economy
- Keynes, J.M., General Theory of Employment, Interest and Money.
- Medema, S.G. and Samuels, W.J. (ed.)., The History of Economic Thought: A Reader
- Menger, C., Principles of Economics
- Negishi Takasha., History of Economic Theory

- Roll Eric., A History of Economic Thought
- Roncaglia, Alessandro., The Wealth of Ideas A History of Economic Thought
- Schumpeter, J. A., History of Economic Analysis
- Screpanti, E. and Zamagri, S., An Outline of the History of Economic Thought

Course 426: Public Economics - II

Module 1 Public Choice (9 Hours)

Majority Voting: the Median Voter Theory and the Voting Paradox – Vote Trading and the Cyclical Majority Problem.; Arrow's Impossibility Theorem; Rent Seeking and Directly Unproductive Profit Seeking Activities; The Political Business Cycle

Module 2 Fiscal Federalism (9 Hours)

The Division of Responsibilities; Principles of Fiscal Federalism: Club Theory and Local Public Goods; Tiebout Hypothesis; Issues in Indian Fiscal Federalism

Module 3 Cost-Benefit Analysis (9 Hours)

Present Value Analysis; Choosing the Appropriate Discount Rate; Measuring Benefits and Costs; Other Considerations

Module 4 Fiscal Policy and Debt Management (9 Hours)

Fiscal Policy and its Link with Monetary Operations; Budget Deficit and its Implications; Fiscal policy for Stabilization - Limits of Fiscal Policy; Management of Public Debt - Ricardian Equivalence

Readings:

- Choudhury, Rabindra Kumar (2008, *Public Finance and Fiscal Policy*, Kalyani Publishers, Ludhiana.
- Ghosh, Ambar and Chandana Ghosh (2008),),Public Sector Economics, Prentice Hall of India, Private Limited, New Delhi.
- Mithani, D. M. (1993), *Principles of Public Finance and Fiscal Policy*, Himalaya Publishing House, Bombay.
- Mundle, S. (1999), *Public Finance Policy: Issues for India*, Oxford University Press, Delhi.
- Peacock, A. and G. K. Shaw (1976), *The Economic Theory of Fiscal Policy*, George Allen and Unwin, London.

SEMESTER – III

Course 531: Economic Growth & Globalisation-I

Module 1 The neoclassical growth models and empirics - The Solow−Swan model with technological progress− the transitional dynamics− economic convergence (absolute and conditional); Welfare, the golden rule and dynamic inefficiency; Abramovitz−Solow growth accounting: measuring total factor productivity (TFP) growth; the Solow model with human capital− The Mankiw, Romer, and Weil model. (10 Hours)

Module 2 Extensions of the neoclassical growth model **-** Neoclassical growth with inter-temporal optimisation− The Ramsey model: Command economy, decentralized economy, dynamic efficiency-Government in the decentralized economy; the extension of the Ramsey growth model−the Diamond-Samuelson two-period Overlapping Generations (OLG) model, dynamic inefficiency, the social security system. (8 Hours)

Module3 Globalisation: A Cross-Country Analysis - Global Distribution of Income - Globalization and Poverty, Global Inequality - Income Inequality, Poverty and Globalization Relationship - Globalization and Regional Poverty - Determinants of Global Poverty - Income Variations and Poverty Inequality Elasticity - Globalisation of Rural Poverty - Globalisation, Inequality and Poverty: What Needs to be Done(8 Hours)

Module 4 Globalisation: Theoretical Approaches - Imaginary World of Economic Equilibrium and Stability - Role of Competition in Driving Capitalist Force - Growing Economies and Market Guidance – Emergence of Competitiveness in the Global Economy (6 Hours)

Module 5 Paradoxes in Globalisation: - The Paradox of FDI Flow into Fast-Growing Economies - The Paradox of Global Efficiency and Local Response - The Paradox of International Marketing in Developing Countries(4 Hours)

Readings:

- Acemoglu, D (2009): Introduction to Modern Economic Growth, Princeton University Press.
- Barro, R.J. (1997): Macroeconomics, Selected Chapters, MIT.
- Barro, R. J and Xavier Sala-i- Martin (2004): Economic Growth, PHI.
- Blanchard, O.J. and Fischer, S (1989): Lectures on Macroeconomics, PHI.
- Carlin Wendy and David Soskice (2005): Macroeconomics: Imperfections, Institutions, and Policies, OUP.
- Jones, C.I (2002): Introduction to Economic Growth, W.W. Norton & Company.
- Ray, D (1998): Development Economics, OUP.
- Romer, David (2001): Advanced Macroeconomics, McGraw Hill.
- Solow, R. (2000): Growth Theory: An Exposition, OUP.
- Guillermo de la Dehesa (2007), What do We Know about Globalization - Issues of Poverty and Income Distribution, Blackwell Publishing
- Ann Harrison (ed)(2007), Globalization and Poverty, NBER Conference Report, University of Chicago Press
- Alan Freeman, Boris Kagarlitsky (eds)(2004), The Politics of Empire - Globalisation in Crisis, Pluto Press, London
- Gabriela Kutting (2004), Globalization and the Environment - Greening Global Political Economy, State University of New York Press, Albany
- Machiko Nissanke, Erik Thorbecke (eds)(2007), The Impact of Globalization on the World's Poor - Transmission Mechanisms
- Michael Perelman (1999), The Natural Instability of Markets - Expectations, Increasing Returns and the Collapse of Capitalism, Princeton University Press

- Michael Chossudovsky (2003), The Globalization of Poverty - The New World Order, Global Research, Pincourt, (Quebec)
- Eric Milliot, Nadine Tournois (eds)(2010), The Paradoxes of Globalization, Palgrave-Macmillan
- Ibrahim Ozer Ertuna (2009), Wealth, Welfare and the Global Free Market - A Social Audit Of Capitalist Economics, Gower Applied Business Research, Farnham (UK)
- Jonathon Porritt (2007), Capitalism as if the World Matters, Earthscan
- Mark T Berger (2004), The Battle for Asia - From Decolonization to Globalization, Routledge-Falmer
- Andre Gunder Frank (1998), Re-ORIENT - Global Economy in the Asian Age, University of California Press

Course 532: Economics of Development & Infrastructural Policies-I

Module 1 Evolution of Measures of Development

Meaning and Evolution of the Concept of Development – Physical Quality of Life Index - Human Development Index-Gender Development Index-Gender Empowerment Measures; Measuring Inequality and Poverty: Income Poverty Index and Human Poverty Index; Alternative Approaches to Standard of Living – Notions of Commodities, Capabilities, Functioning and Entitlements; Concept of Sustainable Development (6 Hours)

Module 2 Theories of Development

Rani's-Fei Model; Myrdal's Notion of Backwash and Spread Effects; Prebisch-Singer Model of Development/Underdevelopment (6 Hours)

Module 3 Financing Development from Domestic Resources

Forms of Savings; Financial Liberalization and its Critique ; Financial System and Economic Development – The Informal Financial Sector; Fiscal Policy and Taxation – Tax Structure in LDCs and its Reforms(3 Hours)

Module 4 Micro-Finance and Development

Economics of ROSCA; Micro Finance Mechanisms: Peer Selection, Peer Monitoring and Dynamic Incentives; Solution to Moral Hazard, Adverse Selection and Costly State Verification; Country Experiences; Strength and Weaknesses of Micro-Finance Programmes (3 Hours)

Module 5 Economics of Education

Education and Human Development; Components of Human Capital. The Demand for Education: Private vs. Social Demand; The Cost of Education: Private Costs and Social Costs; Education as a Merit-Good: Direct and Indirect Benefits; The State and Social Expenditure on Education. (5 Hours)

Module 6 Education Policy

Education Planning in Developing Countries, Education and Labour Market, History of Indian Educational Policy (4 Hours)

Module 7 Economics of Health

Health Dimensions in Development and Human Capital Formation; Health Levels and Women & Child Development. Poverty, Nutritional and Environmental Standard as Determinants of Human Health. Impact of Social Inequality on Health Levels: Class and Gender Perspective; Healthcare and Family. (5 Hours)

Module 8 Health Care Policy and Planning

Economic Dimensions of Healthcare: Healthcare Demand and Supply and Unmet Healthcare. Life Expectancy and the Concept of Human Life Value; Theories and Empirical Studies of Healthcare Delivery, and Productivity. Institutional Issues in Healthcare Financing and Delivery; Healthcare Policy in India. (4 Hours)

Readings:

- Bird, R. M. (1991), *Tax Policy and Economic Development*, Johns Hopkins University Press, Baltimore.
- Dasgupta, Partha (1993), *An Inquiry into Well Being and Destitution*, Clarendon Press.
- Dornbusch R. and A. Reynoso (1989), 'Financial Factor in Economic Development', *American Economic Review, Papers and Proceedings*, May.
- Fry, M. (1997), 'In Favour of Financial Liberalization', *Economic Journal*, May.
- Fukuda-Parr, S. and A. K. Shiva Kumar (eds.) (2003), *Readings in Human Development*, Oxford University Press.
- Kaldor, N. (1956), *Indian Tax Reform*, Ministry of Finance, Delhi.
- Meir, Gerald and James E. Rauch (2000), *Leading Issues in Development Economics*, Oxford University Press.
- Morduch, J. (1999), 'The Microfinance Promise', *Journal of Economic Literature*, 37(4).
- Nourse, Timothy (2001), "The Missing Parts of Microfinance: Services for Consumption and Insurance", *SAIS Review*, Vol. XXI, No. 1, Winter-Spring.
- Ray, Debraj (1999), *Development Economics*, Oxford India Paperbacks. Chap 2.
- Sebstad, Jenifer and Monique Cohen (2001), "Who do the Microfinance Programme Reach?" in *Risk Management and Poverty*, The World Bank, Washington DC.
- Sen, A. K. (1985), *Commodities and Capabilities*, Oxford University Press.
- Sen, A. K. (1999), *Development as Freedom*, Oxford University Press.
- Thirlwal, A. P. (2006), *Growth and Development*, Palgrave, Macmillan.
- Todaro, Michael P. and Stephen C. Smith, *Economic Development*, Pearson Education.
- Baru, V.K. (1998): *Private Healthcare in India: Social Characteristics and Trends*, Sage Publication, New Delhi.
- Becker, G.S. (1974): *Human Capital*, NBER, New York.
- Berman, P. M.E. Khan (1993): *Paying for India's Healthcare*, Sage Publication, New Delhi.
- Dasgupta, P. (1994): *An Enquiry into Well-being and Destitution*, OUP, Oxford.
- Fields, G.S. (1980): *Poverty, Inequality and Development*, CUP, Cambridge.
- Harris-White, B.S. Subrahmanian (eds): *Illfare in India: Essays on India's Social Sector*, Sage Publication, New Delhi.
- LIPS (1995): *National Family Health Survey 1992-93*, Bombay.
- McMahon, W.W. (1994): *Education and Development: Measuring the Social Benefits*, OUP, New York.
- Norton, H.S. (1971): *Modern Transport Economics*, C.E. Merrill, London.
- Panchmukhi,P.R. (1980): 'Economics of Health: A Trend Report', in *ICSSR Survey of Research in Economics*, Vol. VI-Infrastructure, Allied Publishers, Delhi.
- Sen, A.K. (1999): *Poverty and Famines*, OUP, Delhi.

- Sen, A.K. (1984): *Commodities and Capabilities*, OUP, Delhi.
- Sen, A.K. & J. Dréze (eds) 1995: *India: Economic Development and Social Opportunities,* OUP, Delhi.
- Tilak, J.B.G. (1994): *Education for Development in Asia*, Sage Publication, New Delhi.
- UNDP (1998): *Human Development Report*, Technical Note, OUP, New York.
- Vaidyanathan, A. and P.R. Gopinathan (eds) 2001: *Elementary Education in Rural India: A Grassroots View*, Sage Publication, New Delhi.
- Vaizey, J. (1962): *Economics of Education*, Faber, London.
- Woodhall, M. (1992): *Cost-Benefit Analysis in Educational Planning,* UNESCO, Paris.
- World Bank (1993): *World Development Report: Investing in Health*, OUP, New York.

Course 5351: Agricultural Economics – IA

Module 1 Structure and Characteristics of Agriculture in LDCs (6 Hours)

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 Agricultureand 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.

(8 Hours)

Module 3 Economics of Sharecropping

Marshallian critique of sharetenancy----Cheung's analysis of sharetenancy----Co-existence of sharecropping with capitalist farming----Allocation of land among alternative forms of land use----Efficiency of owner versus tenant cultivation----Tenancy and accumulation.(8 Hours)

Module 4 Interlocking of Agrarian Markets

Product-credit interlinkage - Differential interest rates - Labour-credit interlinkage----Lender's risk hypothesis - Employer's risk hypothesis----Consumption efficiency hypothesis and interlinkage - Collateral pricing.(8 Hours)

Module 5 Agricultural Labour and Wage Trends in India

Definition of agricultural labour------ Status of agricultural labourers in India----- Trends in agricultural wages in India----- policy measures and their effects (6 Hours)

Readings:

- Chavan, P. and R. Badamatta(2006): *Trends in Agricultural Wages in India, 1964-65 to 1999-2000*in EPW, Sept. 23.
- Eswaran, M. et al(2009): *SectoralLabour Flows and Agricultural Wages in India, 1983-2004: Has Growth Trickled Down?* In EPW, Jan.10.
- Gangopadhyay, S.: *Some issues in Interlinked Agrarian Markets*in K.Basu, ed., Agrarian Questions.
- Ghatak, S. and K.Ingersent: *Agriculture and Economic Development.*

- Gupta,M.R.: A Theory of Interlinkage based on the Consumption Efficiency Hypothesis.
- Patnaik, U.: *Tenancy and Accumulation* in K.Basu, ed., Agrarian Questions.
- Rakshit, M.K.: *The Labour Surplus Economy*
- Other selected articles to be referred during the course.

Course 5352: Agricultural Economics – IB

Module 1 Role of Agriculture in Economic Development (9 Hours)

Product Contribution, Market Contribution, Factor Contribution and Foreign Exchange Contribution; Interdependence between Agriculture and Industry; Agricultural Transformation and Rural Development

Module 2 Models of Agricultural Development (8 Hours)

Schultz's Model of Transforming Traditional Agriculture; Mellor's Model of Agricultural Development; Boserup's Model of Agricultural Development

Module 3 Women in the Peasant Household (10 Hours)

Concepts for the Analysis of Women; Time Allocation and the Economic Role of Peasant Farm Women; Scope of the New Home Economics; Economics and Intra-Household Relationship; Policy Aspects

Module 4 Technical Change and Peasant Agriculture (9 Hours)

Peasants and Technical Change; Economic Analysis of Technical Change; Farm Mechanization; Modern Varieties

Readings:

- Boserup, Ester (1965), *The Conditions of Agricultural Growth: The Economics of Agrarian Change Under Population Pressure*, George Allen & Unwin Ltd, London.
- Chauhan, D. S. (1954), *Agricultural Economics*, Educational Publishers, Agra.
- Colman, David & Trevor Young (1989), *Principles of Agricultural Economics-Markets and Prices in Less Developed Countries*, Cambridge University Press.
- Desai, Pranav K. (2010), *Agricultural Economics*, Biotech Books, Delhi.
- Ellis, Frank (1988), Peasant Economics-Farm Households and Agrarian Development, Cambridge University Press.
- Evenson, Robert E. & Prabhu Pingali (2010), *Hand Book of Agricultural Economics*, North-Holland.
- Ghatak, Subrata and Ken Ingersent 1984), *Agriculture and Economic Development*, Select Book Service Syndicate, New Delhi by arrangement with Harvester Press Ltd., London.
- Kuznets, S. (1964), 'Economic Growth and the Contribution of Agriculture' in Eicher, C.K. and L. W. Witt (eds), *Agriculture in Economic Development*, McGraw-Hill, New York.
- Martin, Lee R. (ed.) (1992), *A Survey of Agricultural Economics Literature*, Vol.4 (Agriculture in Economic Development), University of Minnesota Press.
- Mellor, John W. (1966): *The Economics of Agricultural Development*, Cornell University Press, Ithaca, N.Y.
- Norton, George W. and Jeffrey Alwang (1993), *Introduction to Economics of Agricultural Development*, McGraw-Hill, Inc.

- Schultz, W. Schultz (1964): *Transforming Traditional Agriculture*, Yale University Press, New Haven, Connecticut.
- Soni, R. N. (1998), *Leading Issues in Agricultural Economics* (3/e), Shoban Lal Nagin Chand & Co, Jalandhar.

Course 5353: Advanced International Economics – IA

Module 1 Foreign Exchange Markets (9 Hours)

Introduction, Exchange Rate Definitions, Characteristics and Participants of the Foreign exchange Market, Arbitrage in the Foreign Exchange Market, the Spot and Forward Exchange Rates, Nominal, Real and Effective Exchange Rates, A Simple Model of the determination of the Spot exchange rates, Alternative Exchange Rate regimes, Currency Swaps, Forward discounts or Premiums, Uncovered Interest Arbitrage, Covered Interest Arbitrage Parity, Covered Interest Arbitrage Margin

Module 2 Balance of Payments (9 Hours)

Introduction, What is Balance of Payments, An Overview of the Sub-accounts in the Balance of Payments, Elasticity and Absorption Approaches to the Balance of Payments

Module 3 Macro Economic Policy in an Open Economy (9 Hours)

Introduction, The Problem of Internal and External Balance, the Mundell-Fleming Model, Limitations of the Mundell-Fleming Model, Key Assumptions, Small Open Economy with Perfect Capital Mobility, The Small Open Economy under Floating and Fixed Exchange Rates

Module 4 Monetary Approach to the Balance of Payments (9 Hours)

Introduction, A Simple Monetary Model, The Monetarist concept of a Balance of Payments Disequilibrium, Implications of the Monetary Approach, Empirical evidence on the Monetary Approach

Readings:

- Salvatore Dominick, International Economics,(8th Edition),2004, John Wiley & Sons
- Keith Pilbeam, International Finance,(3rd Edition), 2006, Palgrave Macmillan
- Maurice D. Levi, International Finance,(5th Edition),(2009), Routledge.
- P. Krugman and M. Obstfeld (1997): *International Economics*. Addison-Wesley.

Course 5354: Advanced International Economics – IB

Module 1 Extensions and Tests of Classical Model of Trade. (10 Hours)

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 It's aftermath.(16 Hours)

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 .(10 Hours)

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.

Readings:

- D.R. Appleyard and Alfred J. Field Jr. (1998): *International Economics*. Irwin McGraw Hill.
- B.Balasa *et. al.* (1971): *The Structure of Protection in Developing Countries*, Johns Hopkins. University Press.
- J.N.Bhagwati (1964) : "The Pure Theory of International Trade", *Economic Journal*, March: pp1-84
- J.N.Bhagwati and T.N.Srinivasan (1983): *Lectures on International Trade*. MIT Press.Cambridge,Mass
- M.Chacoliades (1990): *International Trade: Theory and Policy* .McGraw Hill.Kogakusha, Japan.
- H.Chenery (1961): "Comparative Advantage and Development Policy", *American Economic. Review*, pp-18-51
- A. Dixit and V. Norman (1980): *Theory of International Trade*. Cambridge, Cambridge University Press.
- R. Dornbusch, S. Fischer and P. Samuelson (1977): "Comparative Advantage, Trade and Payments in a Ricardian Model with a Continuum of Growth", *American Economic Journal,* December, pp 823-830
- G. Haberler (1936): *The Theory of International Trade*. W. Hodge and Co. London.
- A. Helpman and Paul Krugman (1985): *Increasing Returns, Imperfect Competition and International Trade*. Boston, MIT Press.
- H. Helpman and P. Krugman (1989): *Trade Policy and Market Structure*. MIT. Press, Mass, Cambridge

Course 5355: Natural Resource and Environmental Economics - IA

Module 1 Resource Types (Non-Renewable and Renewable) − Resource Stocks and Flows and Measures of Resource Scarcity− Resource Rent – Resource Allocation Problems: Basic Concepts, Approaches and Optimisation Methods – Capital Theory and Optimal Control Theory. (9 Hours)

Module 2 Natural Resource Use and Property Rights Structure− Intertemporal Resource Valuation and Property Rights Structure − Economic Analytics and Management Issues in Common Property Resources (CPRs) − Coase Theorem− Institutional Economic Approach to Resource Management. (9 Hours)

Module 3 Economics of Non-renewable and Energy Resources − A Simple Optimal Resource Depletion Model − Dynamic Framework with Optimal Control- Competitive, Monopolistic and Oligopolistic Mining− Fringe and Cartel− Exploration and Backstop Resources− Resource Taxation/ Subsidies.(12Hours)

Module 4 Natural Resource Conservation and Economic Development− Irreversibility and Uncertainty in Natural Resource Use – Irreversibility, Development and Risk.(6 Hours)

Readings:

- Fisher, A.C. 1981, *Resource and Environmental Economics*, Cambridge University Press.
- Alpha C Chiang, (1992): *Dynamic Optimization*, McGraw-Hill.
- Bardhan & Udry, 1999: *Development Microeconomics*, OUP.

- Bhattacharya, R.N., 2001: *Environmental Economics – An Indian Perspective,* Oxford University Press, New Delhi.
- Clement A. Tisdell, 2005: *Economics of Environmental Conservation (2nd Ed)*, Edward Elgar, Cheltenham.
- D. W. Bromely, 1995: *Handbook of Environmental Economics*, Blackwell, London.
- Dasgupta, 1982: *The Control of Resources*, Harvard University Press.
- Elinor Ostrom, 1990: *Governing the Commons: The Evolution of Institutions for Collective Actions*, Cambridge University Press.
- G. Cornelis Van Kooten and Erwin H. Bulte, 2000: *The Economics of Nature: Managing Biological Assets*, Blackwell publishers.
- James & Murty ,1999: *Economics of Water Pollution: The Indian Experience*, OUP.
- Jon M. Conrad, 1999: *Resource Economics*, Cambridge University Press.
- Jon M. Conrad and Colin Whitcomb Clark, 1997: *Natural Resource Economics, Notes and Problems*, Cambridge University Press.
- Kadekodi, 2004: *Environmental Economics in Practice: Case Studies from India*, OUP.
- Katar Singh and Anil Shishodia, 2007: *Environmental Economics: Theory and Applications*, Sage India.
- Nick Hanley, Jason F. Shogren and Ben White, 1997: *Environmental Economics: In Theory and Practice*, Macmillan Press Limited, New Delhi.
- Robert N. Stavins (ed.), 2005: *Economics of the Environment: Selected Readings*, W.W. Norton, 5th edition.
- Roger Perman, Yue Ma, James McGilvray and Michael Common, 2003. *Natural Resource and Environmental Economics (3rd Ed.)*, Pearson Education Ltd., Harlow.
- Steven C. Hackett, 2006: *Environmental and Natural Resource Economics: Theory, Policy and Sustainable Society*, M.E. Sharpe, New York
- U. Sankar (ed.), 2001: *Environmental Economics− Reader*, Oxford University Press.

Course 5356 Natural Resource and Environmental Economics - IB

Module 1 Economics and Environment – The Neoclassical and Ecological Economics Approaches −Laws of Thermodynamics and Biophysical Limits to Growth and Development − Review of Welfare Economics− Pareto Efficiency and Social Welfare Maximisation− Market Failure in Environmental Problems− Public Goods Characteristics of the Environment, Externalities, Non-Convexities and Asymmetric Information (Moral Hazard and Adverse Selection). (9 Hours)

Module 2 Environmental Pollution as a Negative Externality− Types of Pollutants and Sources of Pollution− Pollution Flows and Pollution Stocks− Point and Non-Point-Source− Local, Regional and Global Pollution− Damage and Abatement Cost Functions and the Efficient Level of Pollution Flows− Efficient level of Pollution Stocks − Non-convexity in Damage and Abatement Cost Functions − Setting Pollution Targets. (9 Hours)

Module 3 Theory of Environmental Policy I− Targeting Externalities −Instruments for Achieving Pollution Abatement Targets − Cost Efficiency and Cost-effective Pollution Abatement Instruments− Market-based Instruments (MBI) − Emissions Tax, Emission Abatement Subsidy, Deposit Refund System and Marketable Permit Instruments− Static and Dynamic Efficiency Property of Emissions Tax− Command and Control Instruments (CAC) − Emission Standards and Admissible Production Technologies – Monitoring and Enforcement− Comparison between MBI and CAC Methods. (9 Hours)

Module4: Environmental Resource Accounting and Sustainable Development− Impact of population growth on environment − environmental Kuznets Curve hypothesis, Downward spiral hypothesis, Induced innovation hypothesis; Safe Minimum Standard; Rawl's sustainability principle of non-declining welfare, Solow-Hartwick sustainability rule of non-declining capital; Indicators of sustainability (weak sustainability and strong sustainability) and sustainability rules; Cost-Benefit analysis and sustainability, Models of sustainable development (9 Hours)

Readings:

- Fisher, A.C. 1981, *Resource and Environmental Economics*, Cambridge University Press.
- Alpha C Chiang, (1992), *Dynamic Optimization*, McGraw-Hill.
- Bardhan & Udry, 1999, *Development Microeconomics*, OUP.
- Bhattacharya, R.N., 2001, *Environmental Economics – An Indian Perspective,* Oxford University Press, New Delhi.
- Clement A. Tisdell, 2005, *Economics of Environmental Conservation (2nd Ed)*, Edward Elgar, Cheltenham.
- D. W. Bromely, 1995, *Handbook of Environmental Economics*, Blackwell, London.
- Dasgupta, 1982, *The Control of Resources*, Harvard University Press.
- G. Cornelis Van Kooten and Erwin H. Bulte, 2000, *The Economics of Nature: Managing Biological Assets*, Blackwell publishers.
- James & Murty, 1999, *Economics of Water Pollution: The Indian Experience*, OUP.
- Jon M. Conrad, 1999, *Resource Economics*, Cambridge University Press.
- Jon M. Conrad and Colin Whitcomb Clark, 1997, *Natural Resource Economics, Notes and Problems*, Cambridge University Press.
- Jonathan Gruber, 2013, *Public Finance and Public Policy*, Worth Publishers, New York.
- Kadekodi, 2004, *Environmental Economics in Practice: Case Studies from India*, OUP.
- Katar Singh and Anil Shishodia, 2007, *Environmental Economics: Theory and Applications*, Sage India.
- Markandya & Murty, 2001, *Cleaning up the Ganges: a Cost-benefit Analysis of the Ganga Action Plan*, OUP.
- Nick Hanley, Jason F. Shogren and Ben White, 1997, *Environmental Economics: In Theory and Practice*, Macmillan Press Limited, New Delhi.
- Robert N. Stavins (ed.), 2005, *Economics of the Environment: Selected Readings*, W.W. Norton, 5th edition.
- Roger Perman, Yue Ma, James McGilvray and Michael Common, 2003, *Natural Resource and Environmental Economics (3rd Ed.)*, Pearson Education Ltd., Harlow.
- S.N.Chary and Vinod Vyasulu (eds.), 2000, *Environmental Management- An Indian Perspective*, New Delhi, Macmillan.
- Steven C. Hackett, 2006, *Environmental and Natural Resource Economics: Theory, Policy and Sustainable Society*, M.E. Sharpe, New York
- Thomas and Callan, 2007, *Environmental Economics*, Thomas South-Western.
- U. Sankar (ed.), 2001, *Environmental Economics− Reader*, Oxford University Press.
- W.J. Baumol and W.E. Oates, 1988, *The Theory of Environmental Policy,* (2/e), Cambridge University Press, Cambridge.

Course 5357: Advanced Econometrics− IA

Module 1 Econometric Modeling (14 Hours)

Model Selection Criteria, Types of Specification Errors, and Consequences of Model Selection Errors, Errors of Measurement, Dynamic Econometric Models, Autoregressive and Distributed Lag Models, Koyck's Transformation, Nerlove's Partial Adjustment Model, Cagan's adaptive expectation model

Module 2 Simultaneous Equation Models (14 Hours)

The nature of Simultaneous Equation Models, Simultaneous equation Bias, Approaches to Estimation, Recursive Models and Ordinary Least Squares, the Method of Indirect Least Squares (ILS), the Method of Two-Stage Least Squares (2SLS)

Module 3 Identification Problems (8 Hours)

Notations and Definitions, Rules for Identification, A Test for Simultaneity, Tests for Exogeneity.

Readings:

- Gujarati, D.N.(2003) Basic Econometrics, 4th Edition, Tata-MaGraw-Hill,
- Wooldridge J.M. (2008) Introductory Econometrics-A Modern Approach.3rd Edition, India Edition
- Koutsoyiannis, A. (2nd Edition) Theory of Econometrics (2nd Edition),Oxford University Press
- Ramanathan, R. (2002), Introductory Econometrics with Applications (5th Edition), Cengage Learning India Private Limited
- Maddala, G.S.(2002),Introduction to Econometrics,(3rd Edition),John Wiley & Sons Ltd.
- Enders, W. (2008) Applied Econometric Time Series (2nd Edition), John Wiley & Sons Ltd.
- Pindyck, R.S and Rubinfeld, D.L. (1998), Econometric Models and Econometric Forecasts,(4th Edition),McGraw-Hill International Editions
- Baltagi, B.H. (2005), Econometric Analysis of Panel Data, John Wiley, Chichester, U.K.

Course 5357: Advanced Econometrics– IB

Module 1 Statistical Demand Analysis (14 Hours)

Gross Correlation between Price and Quantity –Nature of Random Disturbances, Use of Cross Section Data in Demand Analysis - Pooling of Time Series and Cross Section. Problems in Pooling of Cross Section and Time Series Samples - Cobweb Models of Demand and Supply

Module 2 Production Function (12 Hours)

Static Multiple Equations: Production Function-Neo Classical Production Identification-Marschak Andrews Problem-Function-Estimation-Studies in the Cobb-Douglas, CES and VES Production Functions.

Module 3 Technical Progress (10 Hours)

Measurement problems in Econometric Analysis-Technical Change-Hicks Neutral-Harrod Neutral Solow, Abramowitz Measurement of Technical Change-Jorgenson- Grilliches Study of Technical Change.

Readings:

- Bridge, J.L. (1971): *Applied Econometrics*, North-Holland Publishing Co., Amsterdam.
- Desai, M. (1979): *Applied Econometrics*, Tata McGraw Hill Publishing Company Ltd., New Delhi.

- Dhrymes, P.J. (1970): *Econometrics - Statistical Foundations and Applications*, Harper and Row, New York.

- Krishna, K.L. (ed.) (1997): *Econometric Applications in India*, Oxford University Press, New Delhi.

- Wooldridge, Jeffrey, M. (2002): *Econometric Analysis of Cross Section and Panel Data,* Cambridge, MA: MIT Press.

SEMESTER – IV

Course 541: Economic Growth and Globalisation– II

Module 1 Endogenous Growth and R&D− Romer (1990) model: Economics of Ideas−Schumpeterian Growth Models− Aghion and Howitt model. (8 Hours)

Module 2 Post-reform growth records of Indian economy: Emerging growth trajectory; Services-led growth; saving and investment− trend and pattern; Growth and distribution− Trends and policies in poverty, inequality and unemployment; Issues in Inclusive Growth. (8 Hours)

Module 3 Indian Agriculture - Broad Overview of Agricultural Production & Growth Trends since 1991; Policies adopted for Agricultural and Rural Development - Cropping Pattern trends - Trends in Public and Private Agricultural Investment - Agricultural Output and Productivity Trends - Changing Agricultural Subsidies – The Roots of Food Insecurity - National Food Security Act 2013 – The PDS vs. TPDS Systems of Public Distribution(6 Hours)

Module 4 India's Long term Foreign Trade Trends - Concepts & Composition of Balance of Payments (BoP) - Alteration in India's Trade between Pre-Liberalisation and Post-Liberalisation Eras - Recent Foreign Trade & EXIM Policies (6 Hours)

Module 5 Indian Labour Markets – Labour Market Segmentation and Segregation – Gender-wise Work Participation trends in India - Formal and Informal Work and Employment – Globalization Impact on the Labour Market – Labour force Participation and Nature of Work – State Case Studies(8 Hours)

Reading List:

- Acemoglu, D (2009): *Introduction to Modern Economic Growth*, Princeton University Press.
- Aghion, Philippe, and Peter Howitt (1998): *Endogenous Growth Theory*, MIT.
- Barro, R. J and Xavier Sala-i- Martin (2004): *Economic Growth*, PHI.
- Blanchard, O.J. and Fischer, S (1989): *Lectures on Macroeconomics*, PHI.
- Carlin Wendy and David Soskice (2005): *Macroeconomics: Imperfections, Institutions, and Policies*, OUP.
- Romer, David (2001): *Advanced Macroeconomics*, McGraw Hill.

- Dev. Mahendra. S (2010): Inclusive growth in India-collected essays, OUP.
- Rakesh Mohan (2008): "Growth Record of Indian Economy: 1950-2008. A Story of Sustained Savings and Investment", Economic and Political Weekly, May.
- Balakrishnan, P (2010): Economic Growth in India: History and Prospect, OUP.
- Fresh updated reading list to be circulated in each session

Course 542: Economics of Development & Infrastructural Policies – II

Module 1 Agricultural Transformation and Rural Development (5 Hours)

Imperative of Agricultural Progress and Rural Development; Structure of Agrarian Systems in the Developing World; Economics of Agricultural Development: Transition from Peasant Subsistence to Specialized Commercial Farming; Toward a Strategy of Agricultural and Rural Development: Some Main Requirements

Module 2 Rural and Urban Labour Markets, Unemployment and Informal Sector (4 Hours)

Rural-urban Migration - The Harris-Todaro Equilibrium; Concept of Informal Sector - Evidence from Developing Countries - Determinants of the Size of Informal Sector and its Linkage Structure with the Rest of The Economy: Theories and Evidences; Possible Dynamics of the Informal Sector in the Process of Economic Development – Some Theories and Evidence

Module 3 Development Strategies (5 Hours)

Different Concepts of Planning - 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; Trends in Governance Reform: Tackling the Problem of Corruption – Decentralization - Development Participation; Stabilization, Adjustment, Reform and Privatization

Module 4 Globalization and the Developing World (4 Hours)

Drivers of Globalization – Trade and Growth – Capital Flow and Immeserization – Trade and Wage Inequality; Globalization and Agriculture; Development and Democracy; WTO and the Nation State

Module 5 Infrastructure and Development (4 Hours)
Role of Social Overhead Capital in Economic Development; Social Physical Infrastructure; Infrastructure as a Public Good; Infrastructure as a Natural Monopoly and the Need for Rate Regulation.

Module 6 Theoretical Issues in Infrastructural Development and Pricing (5 Hours)

'Joint Costs' and 'Sunk Costs' in Infrastructure Development: Difficulties in Cost Imputation; Social Opportunity Costs (SOC) and Social Time Preference (STP) in Infrastructure Projects; Distributive Equity in Infrastructural Services: Cross Subsidisation Issues; Pricing of Infrastructural Principles: Theory of Second-Best, Marginal Cost Pricing, Ramsay Pricing; Infrastructural De-regulation and the Theory of Contestable Markets.

Module 7 Transportation Economics (5 Hours)

The Economics of Location: Transportation and Resource Mobility; Transportation and Regional Economic Development. The Demand for Transportation: Models of Passenger and Freight Demand. Transportation Costs and Cost Functions. Multimodal Transportation: Railways and Roadways in India: Economics of Indian Ports and Waterways; The Problem of Traffic-setting and Intermodal Coordination.

Module 8 Infrastructural Planning (4 Hours)

Estimation of Demand and Supply of Infrastructural Services: Problems of Capital Vintage, Low Operating – Returns and Long Gestation periods – Infrastructure Capacity Planning: Demand Management vs. Supply Management.

Infrastructure Planning in Special Regional Context: Social and Environmental Externalities of Infrastructural Projects; Environmental Impact Assessment (EIA) of sensitive Infrastructural Projects.

Readings:

- Banerjee, Abhijit and Andrew Newman (1998): "Information, the Dual Economy and Development", *Review of Economic Studies*, 65 (4).
- Basu, Kausik (1997): *Analytical Development Economics*, Oxford University Press, Chapter 10.
- Bhagwati, J. (2003): In Defence of Globalization, OUP
- Ellis, Frank, (1988): *Peasant Economics: Farm Households and Agrarian Development*, Cambridge University Press. Chaps 6-7.
- Hart, Keith (1973): "Informal Income Opportunities and Urban Employment in Ghana", *Journal of Modern African Studies*, Vol. 11, No.1.
- ILO, *Decent Work and the Informal Economy*, International Labour Conference, June 2002, Chaps 1-2 (pp.1-38).
- Marjit, S. and Acharyya, R. (2003): International Trade, Wage Inequality and the Developing Economy: A General Equilibrium Approach, Physica-Verlag.
- Meir, Gerald and James E. Rauch (2000): *Leading Issues in Development Economics*, Oxford University Press.
- Meier, Gerald, M. and Joseph E. Stiglitz (eds.) (2001): *Frontiers in Development Economics*, OUP, New York.
- Nafziger, E. Wayne (2006): *Economic Development,* Cambridge University Press, New York.
- Norton, George W. and Jeffrey Alwang (1993): *Introduction to Economics of Agricultural Development*, McGraw-Hill, Inc.
- Rosenzweig, Mark (1988): "Labour Markets in Low-Income countries", Chap 15, in Chenery, Hollis and T. N. Srinivasan (eds): *Handbook of Development Economics, Vol. I*, North-Holland.
- Sachs, J. (2005): The End of Poverty, The Penguin Press
- Sikdar, S. (2003): *Contemporary Issues in Globalization: An Introduction to Theory and Policy in India*, Oxford University Press, New Delhi.
- Srinivasan (eds.), *Handbook of Development Economics*, Volume 3B, North-Holland.
- Stiglitz, J. (2002): Globalization and Its Discontents, Penguin Books.
- Todaro, Michael P. and Stephen C. Smith: *Economic Development*, Pearson Education.
- White, Sarah C. (1996): 'Depoliticizing Development: The Uses and Abuses of Participation', *Development in Practice* 6.

- Baumol, W.J, John C. Panzar, Robert D. Wilig (1982): *Contestable Markets and the Theory of Industry Structure*, Harcourt Brace Javanovich, New York.
- Baumol, W.J. & D.R. Bradford (1970): "Optimal Departures from Marginal Cost Pricing", *American Economic Review*, No. 60, June.
- Biehl, D. (1991): "The Role of Infrastructure in Regional Development", in R.W. Vickerman (ed.) *Infrastructure and Rural Development*, Pion, London.
- Crew, M.A. & P.R. Kleindorfer (1979): *Public Utility Economics*, Macmillan, London.
- Gaulhaber, G.L. (1975): "Cross-Subsidization: Pricing in Public Enterprises", *American Economic Review*, 65(5); 966-977.
- Goyal, S.K. (1985): *Public Enterprises,* IIPA, New Delhi.
- Johansson, B & P. Nijkamp (eds): *Advances in Spatial Theory and Dynamics,* North Holland, Amsterdam.
- Kerr, I.J. (ed) 2001: *Railways in Modern India,* OUP, Delhi.
- Kleindorfer, Paul R. (ed.): *Regulated Industries and Public Enterprise*, Health, Lexington, Mass.
- Kneafsey, J.T. (1975): *Transportation Economics Analysis,* Lexington, Toronto.
- Lakshmanan, T.R. (1989): *Infrastructure and Economic Transformation,* in A.E. Anderson, D.F. Batten.
- Lansing, J.B. (1966): *Transportation and Economic Policy,* Free Press, New York.
- Munty, D. (ed.) 1968: *Transport: Selected Readings*, Penguin, Harmondsworth.
- Nelson, J.R. (1964): *Marginal Cost Pricing in Practice,* Prentice-Hall, Englewood-Cliff.
- Norton, H.S. (1971): *Modern Transport Economics*, C.E. Merill, London.
- Pachauri, R.K. (ed.) 1980: *Energy Policy for India*, Macmillan, Delhi.
- Parikh, J. (ed.) 1997: *Energy Models for 2000 and Beyond,* Tata-McGraw Hill, New Delhi.
- Parikh, K.S. (ed.) 1997: *Energy Policy for India,* Macmillan, Delhi.
- Philip Locklin, D. (1969): *Economics of Transportation*, Richard D. Irwin, Homewood-Illinois.
- Philips, A. (1980): *Ramsey Pricing and Sustainability with Interdependent Demands*, in Bridget M. Mitchell.
- Philips, A. & O.E. Williamson (eds.) 1967: *Price: Issues in Theory, Practice and Public Policy,* University of Pennsylvania Press, Philadelphia.
- Planning Commission (1987): *Report of the Committee on Perspective Planning for Transport Development, 1988,* Planning Commission, New Delhi.
- TERI (1995): *Environmental Considerations and Options in Managing India's Long-term Energy Strategy*, TERI, Mumbai.
- Turvey, R. (ed.) 1968: *Electricity Economics,* Johns Hopkins University Press, Baltimore.
- Turvey, R. (ed.) 1968: *Public Enterprises: Selected Readings*, Penguin, Harmondsworth.
- World Bank (1993): *World Development Report: Infrastructure for Development*, OUP, New York.

Course 5451: Agricultural Economics – IIA

Module 1 Elements of Peasant Economics (8 Hours)

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

Module 2 Farm Management Analysis (8 Hours)

Nature and scope of Farm Management Analysis----Relationship between farm management and production economics----Principles of measuring farm income----Alternative measures of farm income----Farm efficiency measures---Measuring farm costs----Alternative farm cost concepts in India

Module 3 Farm Planning and Budgeting(6 Hours)

Farm planning vs. farm budgeting----Partial budgeting----Complete budgeting----Uses of farm budgets----Preparation of farm budgets

Module 4 Agricultural Finance and Marketing in India (8 Hours)

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---- Financial inclusion---- Agricultural marketing in India-----Marketing policies

Module 5 Agricultural Prices and Agricultural Price Policy in India(6 Hours)

Trends in agricultural prices in India------Agricultural Price policy in India and its evaluation----Agriculture-industry Terms of trade

Readings:

- Deshpande, R.S.(2008): *Price Policy and Minimum Support Prices in a Changing Rural Economy*in S.K. Bhaumick (ed.) Reforming Indian agriculture, Sage.
- Ellis, F.: *Peasant Economics—Farm Households and Agrarian Development*
- Mohan, R.(2006): *Agricultural Credit in India: Status, Issues and Future Agenda*in EPW, march 18.
- R.L. Soni: Leadin Issues in Agriculture Development, Kalyani Publication, Ludhiana.
- Shetty, S.L.(2009): *Agricultural Credit and indebtedness: Ground Realities and Policy Perspectives* in D.N Reddy and S. Mishra (ed.) Agrarian Crisis in India, OUP.
- Yang: *Techniques of Farm Management Analysis*
- Other selected articles to be referred during the course.

Course 5452: Agricultural Economics – IIB

Module 1 Agriculture and International Trade(9 Hours)

Main Features of Trade in Agricultural Goods; Trade Policies in Developed Countries and their Impact on Agricultural Trade; Prebisch's Hypothesis; The Agricultural Self-Sufficiency Argument

Module 2 Supply Response(9 Hours)

The Cobweb Model: An Illustration; 'Perverse Supply Response' in Backward Agriculture; A Simple Supply Response Model; Supply Response in the Underdeveloped Agricultural Labour Market; The Concept of 'Marketed Surplus': Some Methods of Estimation; Some Criticisms of Krishna's Method and the Alternative Approach of Behrman.

Module 3 Farm Size and Factor Productivity (9 Hours)

Peasants and Farm Size; Economic Concepts of Scale and Farm Size; Inverse Relationship of Farm Size and Productivity; Imperfect Factor Markets and Social Efficiency

Module 4 State Interventions and Planning (9 Hours)

Crop Insurance Scheme; Issues in Agricultural Subsidy; Green Revolution, Food Security and Second Generation Reforms in Indian Agriculture; WTO, FAO and Indian Agriculture

Readings:

- Colman, David & Trevor Young (1989): Principles of Agricultural Economics-Markets and Prices in Less Developed Countries, Cambridge University Press.
- Desai, Pranav K. (2010): Agricultural Economics, Biotech Books, Delhi.
- Ellis, Frank (1988): *Peasant Economics - Farm Households and Agrarian Development*, Cambridge University Press.
- Evenson, Robert E. & Prabhu Pingali (2010): Hand Book of Agricultural Economics, North-Holland.
- Ghatak, Subrata and Ken Ingersent 1984): *Agriculture and Economic Development*, Select Book Service Syndicate, New Delhi by arrangement with Harvester Press Ltd., London.
- Martin, Lee R. (ed.) (1992): *A Survey of Agricultural Economics Literature*, Vol.4 (Agriculture in Economic Development), University of Minnesota Press.
- Norton, George W. and Jeffrey Alwang (2010, 2/e): *Introduction to Economics of Agricultural Development*, McGraw-Hill, Inc.
- Prasad, Chandra Shekhar (2009): Agriculture and Rural Development in India, New Century Publications, New Delhi.
- Soni, R. N. (3/e) (1998): Leading Issues in Agricultural Economics, Shoban Lal Nagin Chand & Co., Jalandhar.

Course 5453: Advanced International Economics – IIA

Module 1 Purchasing Power Parity and Floating Exchange rate Experience (9 Hours)

Introduction, Purchasing Power parity Theory and the Law of One Price, Absolute and Relative PPP, Measurement Problems in Testing for PPP, Empirical evidence in PPP

Module 2 Economic and Monetary Union in Europe (9 Hours)

Introduction, The Background to the European Monetary System, Euro Currency Market, Economic and Monetary Union, A History of the Road to European Monetary Union, Optimum Currency Areas

Module 3 International Monetary System- Past, Present and Future (9 Hours)

Introduction, The Gold Standard Period (1880-1914), The Interwar experience, the Bretton Woods System, Collapse of the Bretton Woods System, Operation of the Present System, IMF Operation, WTO

Module 4 Financial Crises in Emerging Market Economies (9 Hours)

Mexico (1994-1995), South-East Asia (1997-1999), Brazil (1999), Argentina (2001-2002), Some Other Current International Economic Problems

Readings:

- Salvatore Dominick, International Economics,(8th Edition),2004, John Wiley & Sons
- Keith Pilbeam, International Finance,(3rd Edition), 2006, Palgrave Macmillan
- Maurice D. Levi, International Finance,(5th Edition),(2009), Routledge

Course 5454: Advanced International Economics – IIB

Module 1 Economic Integration (9 Hours)

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 2 Trade Policy in Developing Countries.(9 Hours)

Import-Substituting Industrialisation; Problems of the Dual Economy; Export-Oriented Industrialisation: The South-East Asian Miracle.

Module 3 Trade and Growth.(9 Hours)

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.

Module 4 Trade and Environment.(9 Hours)

Emerging Situations in Developed and Developing Countries.

Readings:

- H.G.Mannur(1998): *International Economics*. Vikas Publishing House Pvt. Ltd. New Delhi.
- D. Salvatore (1998): *International Economics*. Prentice Hall.
- World Bank (1993): *The East Asian Miracle: Economic Growth And Public Policy*. Oxford University Press, Oxford.
- B. Balasa (1961): *The Theory Of Economic Integration. Vol. I & II*. Irwin, Homewood.
- B. Balasa (1985): "Export Policy Choices And Economic Growth In Developing Countries after the 1973 Oil Shock", *Journal Of Development Economics*, May-June, pp-23-35.
- D.R. Appleyard and Alfred J. Field Jr. (1998). Irwin. McGraw Hill.
- M. Chacoliades (1990): *International Trade: Theory And Policy*. McGraw Hill, Kogakusha , Japan.
- Ulaganathan Sarkar (2004): Environmental Policy in U.Sankar edited book *Environmental Economics*. Oxford University Press.
- D.R. Appleyard and Alfred J. Field Jr (1998): *International Economics*. Irwin McGraw Hill.
- R.G.Lipsey(1961):The Theory of Customs Union:A General Survey.Economic Journal.September,PP-498-513.
- World Bank (1985): *The East Asian Miracle: Economic Growth and Public Policy* Oxford University Press, Oxford

Course 5455: Natural Resource and Environmental Economics – IIA

Economics of Renewable Resource Management:

Module 1 Bioeconomics of Fisheries− Theory of Optimal Resource Harvests− Static and Intertemporal Analysis− Fishery under Alternative Management Objectives− Open Access, Common Property and Efficiently Managed Fishery− Game Theory Modeling− Instruments of Managing Fisheries. (12 Hours)

Module 2 Economics of Forest Resource: Land rent theory and scientific forestry, Maximum sustainable yield forestry , Commercial forestry and Theory of optimal rotation (Faustmann principle and its extensions), Rotation age and Comparative statics, Joint production (timber & amenity services) and socially optimal forest rotation (Hartman rotation), Competing land use and deforestation; Community rights and forest conservation.(12 Hours)

Module 3 Economics of Water Resource: Groundwater allocation – safe yield use principle for sustainable use of groundwater; Surface water allocation – equi-marginal principle for allocation of water; scarcity rent of water for alternative uses, irrigation water markets, marginal user cost and marginal cost pricing of water; average vs. marginal cost of water pricing; price vs. water use restriction; water rights and conservation of water.(12 Hours)

Readings:

- Fisher, A.C. 1981, *Resource and Environmental Economics*, Cambridge University Press.
- Bhattacharya, R.N., 2001, *Environmental Economics – An Indian Perspective,* Oxford University Press, New Delhi.
- Clement A. Tisdell, 2005, *Economics of Environmental Conservation (2nd Ed)*, Edward Elgar, Cheltenham.
- Dasgupta, 1982, *The Control of Resources*, Harvard University Press.
- Elinor Ostrom, 1990, *Governing the Commons: The Evolution of Institutions for Collective Actions*, Cambridge University Press.
- G. Cornelis Van Kooten and Erwin H. Bulte, 2000, *The Economics of Nature: Managing Biological Assets*, Blackwell publishers.
- Gregory S. Amacher, Marrku Ollikainen and Erkki Koskela, 2009, *Economic of Forest Resources*, MIT Press, Cambridge.
- James & Murty, 1999, *Economics of Water Pollution: The Indian Experience*, OUP.
- Kadekodi, 2004, *Environmental Economics in Practice: Case Studies from India*, OUP.
- Katar Singh and Anil Shishodia, 2007, *Environmental Economics: Theory and Applications*, Sage India.
- Nick Hanley, Jason F. Shogren and Ben White, 1997, *Environmental Economics: In Theory and Practice*, Macmillan Press Limited, New Delhi.
- Robert N. Stavins (ed.), 2005, *Economics of the Environment: Selected Readings*, W.W. Norton, 5th edition.
- Roger Perman, Yue Ma, James McGilvray and Michael Common, 2003, *Natural Resource and Environmental Economics (3rd Ed.)*, Pearson Education Ltd., Harlow.
- S.N.Chary and Vinod Vyasulu (eds.), 2000, *Environmental Management- An Indian Perspective*, New Delhi, Macmillan.
- U. Sankar (ed.), 2001, *Environmental Economics− Reader*, Oxford University Press.

Course 5456: Natural Resource and Environmental Economics – IIB

Module 1 Theory of Environmental Policy II – Mixed Instruments of Pollution Control −Tax Standards Approach to Pollution Control− Double Dividend of Environmental Taxes− Pigouvian Tax in General Equilibrium− Choice of Pollution Control Instruments in the Presence of Non-Convexities and Uncertainty (the Weitzman Model) − Pollution Policy with Imperfect Information− Taxes vs. Quotas under Imperfect Monitoring.(12 Hours)

Module 2 International Environmental Problems− Trans-boundary Environmental Problems – Acid Rain Pollution and Stratospheric Ozone Depletion− Economics of Greenhouse Gas (GHG) Emissions and Climate Change− Policy Response to Global Climate Change − Carbon Tax, Tradable Emission Quotas, Clean Development Mechanism (CDM) and Renewable Energy − The Benefits and Costs of International Cooperation on Global Climate Change− International Treaties− The Earth Summit and Kyoto Protocol− The Flexibility-Stringency Trade-off− Game Theory Analysis.(12 Hours)

Module 3 Ecosystem Services and Non-Market Valuation: Ecosystem services and human well-being (Millennium Ecosystem Assessment); Ecosystem services and non-market valuation – importance of non-market valuation, theoretical basis of non-market valuation (willingness to pay and accept compensation); Total economic value – use value and non-use value (bequest value, altruist value and existence value), Estimation of non-market values – direct valuation methods (market price based approach, cost based approach – avoided cost, replacement cost & mitigation or restoration cost, and production function based approaches), indirect market methods (revealed preference method - hedonic price, travel cost, and stated preference approach - contingent valuation method, choice experiment and group valuation).(12 Hours)

Readings:

- Fisher, A.C. 1981, *Resource and Environmental Economics*, Cambridge University Press.
- Alpha C Chiang, (1992), *Dynamic Optimization*, McGraw-Hill.
- Bardhan & Udry, 1999, *Development Microeconomics*, OUP.
- Bhattacharya, R.N., 2001, *Environmental Economics – An Indian Perspective,* Oxford University Press, New Delhi.
- Clement A. Tisdell, 2005, *Economics of Environmental Conservation (2nd Ed)*, Edward Elgar, Cheltenham.
- D. W. Bromely, 1995, *Handbook of Environmental Economics*, Blackwell, London.
- Dasgupta, 1982, *The Control of Resources*, Harvard University Press.
- G. Cornelis Van Kooten and Erwin H. Bulte, 2000, *The Economics of Nature: Managing Biological Assets*, Blackwell publishers.
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- Jon M. Conrad, 1999, *Resource Economics*, Cambridge University Press.
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- Jonathan Gruber, 2013, *Public Finance and Public Policy*, Worth Publishers, New York.
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- Katar Singh and Anil Shishodia, 2007, *Environmental Economics: Theory and Applications*, Sage India.
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- Nick Hanley, Jason F. Shogren and Ben White, 1997, *Environmental Economics: In Theory and Practice*, Macmillan Press Limited, New Delhi.

- Robert N. Stavins (ed.), 2005, *Economics of the Environment: Selected Readings*, W.W. Norton, 5th edition.
- Roger Perman, Yue Ma, James McGilvray and Michael Common, 2003, *Natural Resource and Environmental Economics (3rd Ed.)*, Pearson Education Ltd., Harlow.
- S.N.Chary and Vinod Vyasulu (eds.), 2000, *Environmental Management- An Indian Perspective*, New Delhi, Macmillan.
- Steven C. Hackett, 2006, *Environmental and Natural Resource Economics: Theory, Policy and Sustainable Society*, M.E. Sharpe, New York
- Thomas and Callan, 2007, *Environmental Economics*, Thomas South-Western.
- U. Sankar (ed.), 2001, *Environmental Economics− Reader*, Oxford University Press.
- W.J. Baumol and W.E. Oates, 1988, *The Theory of Environmental Policy,* (2/e), Cambridge University Press, Cambridge.

Course 5457: Advanced Econometrics– IIA

Module 1 Time Series Econometrics (12 Hours)

Some Key Concepts, Spurious Regressions, Stochastic Processes, Dickey-Fuller Unit root Test, Co-integration, Error Correction Model, Causality in Economics, the Granger Causality Test

Module 2 Forecasting Techniques (12 Hours)

The Box-Jenkins Methodology, Vector Auto Regression Model (VAR), Impulse Responses and Variance Decompositions, Autoregressive Conditional Heteroscedasticity (ARCH) models, Generalised ARCH (GARCH) Models

Module 3 Panel Data Regression Models(12 Hours)

Why we need to address Panel Data separately?; Pooled OLS, Constant Coefficient Model, The Fixed Effects Least Squares Dummy Variable (LSDV) Model, The Fixed Effect within Group Estimator, the Random Effects Model (REM)

Readings:

- Gujarati, D.N.(2003) Basic Econometrics, 4th Edition, Tata-MaGraw-Hill,
- Wooldridge J.M. (2008) Introductory Econometrics-A Modern Approach.3rd Edition, India Edition
- Koutsoyiannis, A. (2nd Edition) Theory of Econometrics (2nd Edition),Oxford University Press
- Ramanathan, R. (2002), Introductory Econometrics with Applications (5th Edition), Cengage Learning India Private Limited
- Maddala, G.S. (2002), Introduction to Econometrics,(3rd Edition),John Wiley & Sons Ltd.
- Enders, W. (2008), Applied Econometric Time Series (2nd Edition), John Wiley & Sons Ltd.
- Pindyck, R.S and Rubinfeld, D.L. (1998), Econometric Models and Econometric Forecasts, (4th Edition), McGraw-Hill International Editions
- Baltagi, B.H. (2005), Econometric Analysis of Panel Data, John Wiley, Chichester, U.K.

Course 5458: Advanced Econometrics– IIB

Module 1 Regression with Qualitative Independent Variables (12 Hours)

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, Logit, Probit and Tobit Models (any two).

Module 2 Factor Analysis (12 Hours)

Module 3 Computer Applications(12 Hours)

Spreadsheet – excel, Graphs & Diagrams, Descriptive statistics OLS, Cross-section and time series applications using statistical packages.

Readings:

- Anderson, J.W. (1958): *Introduction to Multivariate Statistical Analysis*, Chapman and Hall, London.
- Bridge, J.L. (1971): *Applied Econometrics*, North-Holland Publishing Co., Amsterdam.
- Brillinger, D.R. (1975) *Time Series: Data Analysis and Theory*, New York.
- Chatfield, C. and A.J. Collius (1980): *Introduction to Multivariate Analysis*, Chapman and Hall, London.
- Chow, G.G. (1983): *Econometrics*, McGraw Hill, New York.
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- Dhrymes, P.J. (1970): *Econometrics- Statistical Foundations and Applications*, Harper and Row, New York.
- Fisher F.M. (1966): *The Identification Problem*, McGraw Hill.
- Fuller, W.A. (1986): *Introduction to Statistical Time Series*, New York, Wiley.
- Goldberger, A.S. (1984): *Econometric Theory*, Wiley.
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- Gramer, H. and Leadbetter, M.R (1967): *Stationary, and Related Stochastic Process*, New York; Wiley.
- Granger, C.W.J. and Newbold. D.P. (1987): *Forecasting Economic Time Series (3/e),* New York, Academic Press.
- Greene, William H. (2003): *Econometric Analysis (5/e)*, Pearson Education, Inc., New Jersey.
- Grenander, U. and Resenblatt, M. (1957): *Statistical Analysis of Stationary Time Series*, New York.
- Gujarati, D.N. (2003): *Basic Econometrics (4/e)*, McGraw-Hill International Edition, New York.