

# **SYLLABUS FOR M. A. IN ECONOMICS**

**Admission Batch 2017 – 18**

**(Academic Session 2017-19)**

**Choice Based Credit System**



**P.G. DEPARTMENT OF ECONOMICS,  
S.C.S. (Autonomous) College, Puri  
Odisha, India**

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## Structure of Syllabus for MA in Economics

### SEMESTER – I

Paper Code	Nature of Paper	Paper Name	Credit
HCE101	Hard Core	Microeconomics - I	05
HCE102		Macroeconomics - I	05
HCE103		Quantitative Methods - I	05
HCE104		Public Economics	05
HCE105		Indian Economy	05

### SEMESTER – II

Paper Code	Nature of Paper	Paper Name	Credit
HCE201	Hard Core	Microeconomics - II	05
HCE202		Macroeconomics - II	05
HCE203		Quantitative Methods - II	05
HCE204		Economics of Social Sector	05
CEE201	Core Elective	Core Elective - I	05

### SEMESTER – III

Paper Code	Nature of Paper	Paper Name	Credit
HCE301	Hard Core	Basic Econometrics	05
CEE301	Core Elective	Core Elective - II	05
AEE301	Allied Elective	Allied Elective - I	05
FEE301	Free Elective	Free Elective - I	05
FEE302		Free Elective - II	05

### SEMESTER – IV

Paper Code	Nature of Paper	Paper Name	Credit
CEE401	Core Elective	Core Elective - III	05
CEE402		Core Elective - IV	05
AEE401	Allied Elective	Allied Elective - II	05
AEE402		Allied Elective - III	05
AEE403		Allied Elective - IV	05

**Total Credit    100**

## **Available Electives and Allied: Semester-wise**

### **SEMESTER - II**

#### **Core Electives**

1. Economics of Growth and Development
2. Labour Economics

### **Semester - III**

#### **Core Electives**

1. International Economics
2. Industrial Economics
3. Banking

#### **Allied Electives**

1. Agricultural Economics
2. History of Economic Thought
3. Managerial Economics

#### **Free Electives**

1. International Finance
2. Computer Application in Economics
3. Environmental Impact Assessment
4. Entrepreneurship and Economic Development

### **Semester - IV**

#### **Core Electives**

1. Economics of Environment
2. Dissertation
3. Demography
4. Rural Economics

#### **Allied Electives,**

1. Financial Institutions and Market
2. Mathematical Economics
3. Advanced Econometrics
4. Economics of Gender and Development
5. Financial Inclusion and Economic Development
6. Economics of Discrimination
7. Financial Economics

#### **Proposed Allied Department**

1. Commerce
2. Management
3. PM&IR
4. Statistics
5. Sociology

**Semester – I**  
**Paper HCE101**  
**Microeconomic Analysis I**

**Module - I**

Theory of demand, Utility function Ordinary and Compensated demand functions, lexicographic ordering, Slutsky theorem, Revealed Preference Theory.

**Module - II**

Consumers' choice involving Risk and Uncertainty: N – M Utility function, Utility – Expenditure duality, Indirect Utility function, Inter-temporal consumption, Consumer's surplus.

**Module - III**

The production function, Elasticity of substitution, C-D and CES Production function and their properties, Multiproduct firm and its equilibrium

**Module - IV**

Theories of cost: various types of short-run and long-run costs; Critical evaluation of marginal Analysis: Baumol's sales Revenue maximization, Williamson's model of managerial discretion

**Module - V**

An overview of Partial and General Equilibrium – Walrasian system, Excess Demand Approach, existence, stability and uniqueness of equilibrium

**Basic Reading List:**

1. Handerson, J. M. & Quandt, R.E. (1980), Micro Economic Theory – A Mathematical Approach, McGraw Hill Co.
2. Varian, H. R. (1992), Micro Economic Analysis, WW Norton & Co., New York.
3. Gravelle, H & Rees, R (1992) Micro Economics, Pearson Education U.K.
4. Snyder, C & Nicholson, W (2008), Fundamentals of Micro Economics, Cengage learning, New Delhi.
5. Maddala, G.S. & Miller, E (2004), Micro Economics: Theory and Application, Tata Mc Graw Hill, New Delhi.

**Paper HCE102**  
**Macroeconomic Analysis - I**

**Module - I**

Circular Flow of Income in two, three and four sector economy; different forms of national income accounting –social accounting, input-output accounting, flow of funds accounting and balance of payments accounting.

**Module - II**

Theory of Income determination, consumption function, Keynes' psychological law – implications of the law; short-run and long-run consumption function; empirical evidence on consumption function; income- consumption relationship – absolute income, relative income, life cycle and permanent income hypotheses.

**Module - III**

Investment behavior, Marginal efficiency of capital and investment – long run and short run; the accelerator and investment behavior – impact of inflation; Influence of policy measures on investment – empirical evidence.

**Module - IV**

Financial intermediation – a mechanistic model of bank deposit determination; A behavioral model of money supply determination, a demand determined money supply process; RBI approach to money supply; money supply and open economy; control of money supply.

**Module - V**

Classical approach to demand for money – Quantity theory approach, Fisher's equation, Cambridge quantity theory, Keynes's liquidity preference approach, Derivation of LM curve. Post-Keynesian approaches to demand for money – Patinkin and the Real Balance Effect. Approaches of Baumol and Tobin; Friedman and the modern quantity theory:

**Basic Reading List:**

1. Macro Economics – An Introduction to Keynesian-Neo-Classical Controversies: R. Levacic and A. Rebmann.
2. Macroeconomics: DornBusch, Fisher
3. Macroeconomics: Theory and Policies: Richard, T. Froyen
4. Macroeconomics Analysis: E. Shapiro
5. Macroeconomics: N.G. Manikiw

**Paper HCE103**  
**Quantitative Methods – I**

**Module - I**

Functions: Types of functions, Limit, Continuity and derivatives- Rules of differentiation: Revenue, Cost demand and Supply functions; Elasticities, Multivariable functions – Production functions; Partial derivatives; Total differential; Total derivatives; Jacobian and functional dependence.

**Module - II**

Matrix – Types of matrices, Algebra of matrices- Transposition, Inversion, Rank of a matrix; Determinants – their properties; Solution of a system of equations; Vector space and linear independence of vectors; Eigen values and eigen vectors; Introduction to Input – output Analysis.

**Module - III**

Quadratic forms; Optimization – Hessian and constrained optimization – bordered hessian- Economic applications; Linear programming – Graphical solution to a linear programming

**Module - IV**

Integration – Rules of integration; Application to consumer's surplus and producers surplus; growth rates; Difference equations – Solution of first and second order difference equations; Domar's growth model and Lagged market equilibrium models; Differential equations – Solution to first order linear differential equation, Dynamics of market price; Non-linear differential equation of first order & first degree.

**Module - V**

Game theory - Concept of Game, Types of Game, Two-persons-zero sum game, Nash Equilibrium, Prisoner's dilemma. Maxmin - minmax principle; Saddle point solution, Dominant Strategy, Mixed Strategies; Graphical solution of  $2 \times n$  and  $m \times 2$  Games

**Basic Reading List:**

1. Chiang, A. C. (1986) "Fundamental Methods of Mathematical Economics", McGraw Hill.
2. Gupta, S. C. (1993) "Fundamental Methods of Applied Statistics", S. Chand & Sons.
3. Spiegel, M.R. (1992), "Theory & Problems of Statistics" Mc Graw Hill Book Co
4. Yamane, Taro (1975), "Mathematics for Economists", Prentice Hall of India, New Delhi.
5. Mukherji & Guha (2011), "Mathematical Methods & Economic Theory" OUP.

## **Paper HCE104**

### **Public Economics**

#### **Module - I**

Role of government: Changing perspectives: government in a mixed economy. Private goods, public goods and merit goods. Market failure and its causes– imperfections, decreasing costs, externalities, public goods. Private and public mechanism for allocating resources. Problems for allocating resources.

#### **Module - II**

Problems of preference revelation and aggregation of preferences; Voting systems; Arrow's impossibility theorem. An economic theory of democracy. Rent seeking and directly unproductive profit seeking (DUP) activities. Theory of club goods; Tiebout model.

#### **Module - III**

Indian tax system; Revenue of the Union, State and local bodies; Major taxes in India; base of taxes, direct and indirect taxes, taxation of agriculture, expenditure tax, reforms in direct and indirect taxes on services; Non-tax revenue of Centre, State and local bodies. Share of different sources of revenue in the revenue receipts and their trend.

#### **Module - IV**

Structure and growth of public expenditure. Wagner's law of increasing state activities; Wiseman–Peacock hypothesis; trends in public expenditure in India. Theory of optimal taxation; Excess burden of taxes Tradeoff between equity and efficiency; Theory of measurement of dead weight losses. Budgetary deficits and its implications. Fiscal crisis and fiscal sector reforms in India.

#### **Module - V**

Principles of multi-unit finance; Fiscal federalism in India; Vertical and horizontal imbalance; Assignment of function and sources of revenue; constitutional provisions; Finance Commission and Planning Commission; Devolution of resources and grants; Theory of Grants; Resource transfer from Union to States – Criteria for transfer of resources; Centre – State financial relations in India; Problems of states' resources and indebtedness; Transfer of resources from Union and States to local bodies, Criteria of Finance Commission and Planning Commissions for transferring funds.

#### **Basic Reading List**

1. Cullis John, Philip Jones (2009) Public Finance and Public Choice. Oxford University Press.
2. Musgrave, Richard, A. and Peggy B. Musgrave (2004) 'Public Finance in Theory and Practice'. Fifth edition, TATA McGraw-Hil.
3. Herber, B. P. (1967) 'Modern public finance'. Richard D. Irwin, Homewood.
4. Joseph E. Stiglitz (2000) Economics of the Public Sector. W W Norton
5. Rangarajan, C. and D. K. Srivastava (2011) 'Federalism and Fiscal Transfers in India'. Oxford University Press, New Delhi.

**Paper HCE105**  
**Indian Economy**

**Module - I: Growth and Economic Reforms - I**

Phase I (1951–65)-Takeoff under a Liberal Regime: era of liberal trade and foreign investment policies, a restrictive industrial policy regime, agriculture ; Phase II (1965–81)-Socialism Strikes with a Vengeance: the political context, the crisis and failed liberalization episode, strangulation of industry, foreign trade, factor market regulation-land and labour, nationalization of banks, agriculture, insurance, savings and investment

**Module - II: Growth and Economic Reforms - I**

Phase III (1981–88) - Liberalization by Stealth: Political Context, Deregulation of Industry, Trade Liberalization, and other Reforms; Phase III (1988 onwards) - Triumph of Liberalization: Political Context, Shifting of Consensus, Growth and BOP Crisis, New Industrial Policy, Trade Liberalization

**Module - III: Major Economic Problems**

Poverty: estimations – old and new method, phase I and II – good intentions but poor performance, phase III and IV – liberalizing reforms and significant decline in poverty, expenditure growth - the NAS and NSS, farmers suicide; Inequality: forms, inequality at national level, regional inequality, urban – rural inequality; Unemployment: measurement, trends and patterns, rural and urban, gender aspect of unemployment, jobless growth, green jobs and growth; Inflation: trend and pattern, inflation and growth debate, sources of inflationary pressure, food price inflation

**Module - IV: Sectoral Growth in India**

Agricultural Sector: performance, food security, input market, public investment in agriculture, agriculture and environment; Secondary Sector: output and employment pattern, productivity, privatization, regional aspects; Tertiary Sector: what explains rapid service growth, is it sustainable, Education – infrastructure and outcome, Health – infrastructure and outcome  
Fiscal Policy of India: fiscal consolidation in India, sustainability of debts and deficits, tax reform, FRBM Act 2003; Monetary Policy: role of financial sector in economic growth, financial sector reform, money and banking in pre- and post-1991, capital market



### Basic Readings

1. Panagariya, Arvind (2008): **India: the Emerging Giant**, Oxford University Press, New York
2. Acharya, S. and Mohan, R. (Eds.) (2010): **India's Economy: Performance and Challenges**, Oxford University Press, New Delhi.
3. Ahluwalia, I. J. and Little, I. M. D. (Eds.) (1998): **India's Economic Reforms and Development: Essays for Manmohan Singh**, Oxford University Press, New Delhi.
4. Rakshit, M. (2009): **Macroeconomics of Post-reform India**, Oxford University Press, New Delhi

### Additional Reading

1. Bhagwati, Jagdish N. and Srinivasan, T. N. (1975): *Foreign Trade Regimes and Economic Development: India*, National Bureau of Economic Research, USA, Chapter 1 (Pp. 1-32).
2. Basu, K. And Maertens, A. (2007): The pattern and Causes of Economic Growth in India, *Oxford Review of Economic Policy*, 23(2): 143-167.
3. Deaton, A. and Dreze, J. (2002): Poverty and Inequality in India: A Re-Examination, *Economic and Political Weekly*, 37(36): 3729-48.
4. Sarakar, S. And Meheta, B. S. (2010): Income Inequality in India: Pre-and Post Reform Periods, *Economic and Political Weekly*, 45(37):45-55.
5. Palmer-Jones, R. and Sen, K. (2001): On Indian Poverty Puzzles and Statistics of Poverty, *Economic & Political Weekly*, 36(3): 211-217.
6. Minhas, B.S., Jain, L. R. and Tendulkar, S. D. (1991): Declining incidence of poverty in the 1980s: Evidence versus aretefacts, *Economic and Political Weekly*, 26 (27 & 28): 1673-1682.
7. Patnaik, Utsa (2004): The Republic of Hunger, *Social Scientist*, 32(9-10): 9-35.
8. Patnaik, Utsa (2007): Neoliberalism and Rural Poverty in India, *Economic & Political Weekly*, 42(30): 3132-3150.
9. Himanshu (2009). *Toward New Poverty Line for India (Background Paper for the Expert Group to Review the Methodology for Estimation of Poverty)*, Planning Commission, Government of India, New Delhi.
10. Raveendran, G. (2010): New Estimates of Poverty in India: A Critique of the Tendulkar Committee Report, *Indian Journal of Human Development*, 4(1): 75-89.
11. Swaminathan, M. (2010): The New Poverty Line: A Methodology Deeply Flawed, *Indian Journal of Human Development*, 4(1): 121-125.
12. Meheta, A. K. And Shah, A. (2001): *Chronic Poverty in India: Overview Study*, CPRC Working paper 7, Ahmadabad.
13. Pathak, D. C. And Mishra, S. (2011): Poverty Estimates in India: Old and New Methods, 2004-05, WP-2011-015, IGIDR, Mumbai
14. Jayaraman, R. and Lanjouw, P. (1999), The Evolution of Poverty and Inequality in Indian Villages, *The World Bank Research Observer*, 14(1): 1-30.
15. GoI (2009): *Report of the Expert Group to Review the Methodology for Estimation of Poverty*, Planning Commission, Government of India, New Delhi.
16. GoI (2011): *Press Note on Poverty estimates*, Planning Commission, Government of India, New Delhi.
17. GoI (2010): *Report on Employment and Unemployment Survey 2009-10*, Labour Bureau, Ministry of Labour and Employment, Government of India, Chandigarh.
18. Sarkar, S. (2008): *Trends and Patterns of Labour Supply and Unemployment in India*, ILO, New Delhi.
19. Krishnan, T. N. (1992): Population, Poverty and Employment in India, *Economic and Political Weekly*, 27(46): 2479-97.
20. Datt, R. (1994): Jobless Growth: Implications of New Economic Policies, *Indian Journal of Industrial Relations*, 29(4): 407-27.
21. Bowen, A. (2012): Green Growth, Green Jobs and Labour Market, PRWP 5990, World Bank, Washington DC.

22. Brahmananda, P. R. And Nagaraju, G. (2002): Inflation and Growth in the World: Some Simple Empirics, In Montek S. Ahluwalia, Y. V. Reddy and S. S. Tarapore (Eds.) *Macroeconomics and Monetary Policy: Issues for a Reforming Economy*, Oxford University Press, New Delhi, Pp. 43-66.
23. Nachane, D. M. And Laxmi, R. (2002): Dynamics of Inflation in India: A P-Star Approach, In Montek S. Ahluwalia, Y. V. Reddy and S. S. Tarapore (Eds.) *Macroeconomics and Monetary Policy: Issues for a Reforming Economy*, Oxford University Press, New Delhi, Pp. 66-85.
24. Ray, Shovan 2007(): *Oxford Handbook of Agriculture*, Oxford University Press, New Delhi.
25. Bardhan, P. (2010): *The Political Economy of Development in India*, Oxford University Press, New Delhi.
26. Alagh, Y. K. (1971): Indian Industrialisation: Fact and Fiction, *Economic and Political Weekly*, 6(30/32): 1677-82.
27. Bagchi, A. K. (1977): Export-Led Growth and Import-Substituting Industrialisation, *Economic and Political Weekly*, 12(6/8): 219-24.
28. Baru, S. (1988): State and Industrialisation in a Post-Colonial Capitalist Economy: The Experience of India, *Economic and Political Weekly*, 23(4): 143-50.
29. Dholakia, R. H. (1989): Regional Aspects of Industrialisation in India, *Economic and Political Weekly*, 24(46): 2563-67.
30. Hanumantha Rao CH. (1991): Rural Society and Agricultural Development in Course of Industrialisation: Case of India, *Economic and Political Weekly*, 26(11/12): 691-96.
31. Unni, J., Lalitha, N. And Rani, U. (2001): Economic Reforms and Productivity Trends in Indian Manufacturing, *Economic and Political Weekly*, 36(41): 3914-22.
32. Nagaraj, R. (2005): Industrial Growth in China and India: A Preliminary Comparison, *Economic and Political Weekly*, 40(21): 2163-71.
33. Bhattacharya, B. B. And Mitra, A. (1990): Excess Growth of Tertiary Sector in Indian Economy: Issues and Implications, *Economic and Political Weekly*, 25(44): 2445-50.
34. Acharya, S. (2006): *Essays on Macroeconomics Policy and Growth in India*, Oxford University Press, New Delhi.
35. Rao, Govinda M. and Amarnath, H. K. (2000): Fiscal Correction: Illusion and Reality, *Economic and Political Weekly*, 35(32): 2806-2809.
36. Jha, R. (2003): Fiscal Consolidation, *Economic and Political Weekly*, 38(12/13): 1102-1103.
37. Chelliah, R. J. (2004): Implementing FRBM Act, 2003: Evaluating Kelkar Task Force Report, *Economic and Political Weekly*, 39(36): 3971-3975.
38. Rao, M. G. (2009): The Fiscal Situation and a Reform Agenda for the New Government, *Economic and Political Weekly*, 44(25): 77-85.
39. Sundararajan, V and Das, U. S. (2002): Transparency in Monetary and Financial Policies and its Role in Financial Sector Reform, In Montek S. Ahluwalia, Y. V. Reddy and S. S. Tarapore (Eds.) *Macroeconomics and Monetary Policy: Issues for a Reforming Economy*, Oxford University Press, New Delhi, Pp. 247-66
40. Reddy, Y. V. (2002): Dimensions of Financial Development, Market Reforms, and Integration: The Indian Experiences, In Montek S. Ahluwalia, Y. V. Reddy and S. S. Tarapore (Eds.) *Macroeconomics and Monetary Policy: Issues for a Reforming Economy*, Oxford University Press, New Delhi, Pp. 282-306.
41. Shukla, S. P. (2004): Globalization and the Financial Sector in the Indian Economy, *Social Scientist*, 32(3/4): 3-15.

**Semester – II**  
**Paper HCE201**  
**Microeconomic Analysis – II**

**Module – I**

Price and output determination under Monopoly; Price discrimination and dumping aspects, Bilateral monopoly. Monopolistic competition – product differentiation, Selling costs and excess capacity – effects of free entry and price competition.

**Module – II**

Non-collusive oligopoly models: Cournot, Bertrand, Stackelberg, Sweezy, Chamberlin, Collusive oligopoly models: Cartels, price leadership and basing point price systems.

**Module – III**

Critical evaluation of marginal Analysis: Baumol's sales Revenue maximization, Williamson's model of managerial discretion, Marris model of managerial enterprise.

**Module – IV**

Neo-classical Approach, Product exhaustion theorem, Euler's theorem, distribution theories in imperfect product and Factor markets.

**Module – V**

Pareto optimal conditions; B-S Social welfare function, Compensation criteria, optimum welfare under market imperfections and externality.

**Basic Reading List**

1. Handerson, J. M. & Quandt, R.E. (1980), Micro Economic Theory – A Mathematical Approach, Mc Graw Hill Co.
2. Mankiw, (2006), Principles of Micro Economics, Cengage Learning India, New Delhi..
3. Landsburg, S.E. (2008), Pricing, Cengage Learning India, New Delhi
4. Baumol, WJ (1977), Economic Theory & Operation Analysis, Prentice – Hall of India, New Delhi.
5. Bilas, R.A. (1985), Micro Economic Theory, Mc Graw Hill Publishers.

## **Paper HCE202 Macroeconomic Analysis II**

### Module I

Keynesian views on interest. The IS-LM model; Extension of IS-LM model with government sector; Relative effectiveness of monetary and fiscal policies; Extension of IS-LM models with labour market and flexible prices. Under employment Equilibrium- wage rigidity, Inconsistency between saving and Investment, Keynes's Effect & Pigou Effect.

### Module II

Theories of Trade cycle, Innovation (Schumpeter). Kaldor, Samuelson, Hicks, Goodwin's model of Trade Cycle, Control of business cycle.

### Module III

Classical, Keynesian and Monetarist approaches to inflation' Structuralist theory of inflation; Philips curve analysis – short run and long run Philips curve; Samuelson and Solow – the natural rate of unemployment hypothesis; Tobin's modified Philips curve.

### Module IV

The new classical critique of micro foundations, the new classical approach; Policy implications of new classical approach – empirical evidence

### Module V

The open Economy Macro Economics: Exchange Rate and International Monetary System- Exchange Rate and market for foreign exchange; Current exchange rate system; Experience with floating exchange rates. Monetary and Fiscal Policy in the Open Economy - The Mundell-Fleming Model; Monetary and Fiscal Policy under Imperfect and Perfect Capital Mobility- Under fixed and Flexible Exchange Rate.

### Basic Reading List:

1. Macro Economics - An Introduction to Keynesian-Neo-Classical Controversies: R. Levacic and A. Rebmann.
2. Macroeconomics: DornBusch, Fisher
3. Macroeconomics: Theory and Policies: Richard, T. Froyen
4. Macroeconomics Analysis: E. Shapiro
5. Macroeconomics: N.G. Manikiw

## **Paper HCE203 Quantitative Methods II**

### Module I

Deterministic and non-deterministic experiments; Sample space; Addition rule and complementation rule, Conditional probability, Multiplication rule, Independence of events; Bayes theorem and problems; Random variable and its probability distribution, probability mass function and probability density function, expectation and variance of a random variable, laws of expectation and variance.

### Module II

Theoretical probability distributions: Binomial, Poisson and Normal probability distributions and their properties; Normal approximation to Binomial; joint, marginal and conditional probability distributions, independence of random variables, covariance, results on expectation and variance.

### Module III

Basic concepts of sampling, random and non-random sampling; simple random sampling, stratified random sampling and p.p.s. sampling; concept of an estimator and its sampling distribution; desirable properties of an estimator.

### Module IV

Interval estimation; statistical hypotheses- null and alternative; Type I and Type II errors; power of a test, confidence intervals and hypothesis testing based on z, t,  $\chi^2$  (chi-square) and F-distributions.

### Module V

Correlation and regression analysis; correlation coefficient and its properties, rank correlation co-efficient, concept of least squares and the lines of regression; standard error of estimates; partial and multiple correlation and regression (applications only) methods of estimation of non-linear equations: parabolic, exponential, modified exponential, Gompertz and logistic relationships

### Basic Reading List:

1. Chiang, A. C. (1986) "Fundamental Methods of Mathematical Economics", MNC GrawHill.
2. Gupta, S. C. (1993) "Fundamental Methods of Applied Statistics", S. Chand & Sons.
3. Spiegel, M.R. (1992), "Theory & Problems of Statistics" Mc Graw Hill Book Co
4. Yamane, Taro (1975), "Mathematics for Economists", Prentice Hall of India, New Delhi.
5. Mukherji & Guha (2011), "Mathematical Methods & Economic Theory" OUP.

## Paper HCE204 Economics of Social Sector

### Module I: Introduction to Economics of Education

Economics of Education: definition, methods, evidence and policy, Classical Economists and Education; Human Capital: historical root, uses, sources, values, investment in human capital; education and economic growth: dimensions, sources, contributions (12 hours)

### Module II: Investment in Education

Education Production Function: concept, estimation, role in policy analysis; Costs of Education: direct and indirect; Benefits of Education: types, measurement; Returns to Education: meaning, type, estimation (12 hours)

### Module III: The Demand for and supply of Health and Health Services

Demand for Health and health care: concept, a theoretical and empirical investigation, determinants; Economics of moral hazards; Supply of health and health care: concept, determinants (12 hours)

### Module IV: Health Production and Development

Health Production: concept and estimation; Health and Development: theory and evidences

### Module V: Overview of India's Health Sector

Features of Indian Health Sector; Health Care System in India: history, structure, programs, infrastructure, health information system; Public Health in India: Health Sector Reform In India (12 hours)

### Basic Reading List:

1. Cohn, Elchanan (1972): **The Economics of Education**, Lexington Books, D. C. Heath and Company, Lexington.
2. Blaug, M. (1970): **An Introduction to the Economics of Education**, Allen Lane The Penguin Press, London
3. Zweifel, P., Breyer, F. and Kifmann, M. (2009): **Health Economics**, Springer-Verlag Berlin Heidelberg

### Additional Reading

1. Tu, P. N. V. (1969): The Classical Economists and Education, *Kyklos*, 22(4): 691-716.
2. Blaug, M. (1985): Where are We Now in the Economics of Education?, *Economics of Education Review*, 4(1): 17-28.
3. Levin, H. (1989): Mapping the Economics of Education. An Introductory Essay, *Educational Researcher*, 18(4):13-73.
4. Machin, S. (2008): The New Economics of Education: Methods, Evidence and Policy, *Journal of Population Economics*, 21(1): 1-19.
5. Schultz, T. W. (1961): Investment in Human Capital, *American Economic Review*, 51(1): 1-17.
6. Kiker, B. F. (1966): The Historical Roots of the Concept of Human Capital, *Journal of Political Economy*, October 1966, 481-99

7. Sweetland, S. R. (1996): Human Capital Theory: Foundations of a Field of Inquiry, *Review of Educational Research*, 66(3): 341-59.
8. Kiker, B. F. (1969): Von Thunen on Human Capital, *Oxford Economic Papers*, 21(3): 339-43.
9. Becker, G. S. (1962): Investment in Human Capital: A Theoretical Analysis, *Journal of Political Economy*, 70(5): 9-49.
10. Bowman, M. J. (1964): Schultz, Denison, and the Contribution of 'Eds' to National Income Growth, *Journal of Political Economy*, October 450-64.
11. Denison, E. F. (1964): Measuring the Contribution of Education to Economic Growth, In *The Residual Factor and Economic Growth*, pp.13-55, OECD, Paris
12. Eckaus, R. S. (1962): Education and Economic Growth, In *Economics of Higher Education*, edited by S. J. Mushkin pp. 102-128.
13. McClelland, D. C. (1966): Does Education Accelerate Economic Growth?, *Economic Development and Cultural Change*, April pp. 257-78.
14. Miller, W. L. (1967): Education as a Source of Economic Growth, *Journal of Economic Issues*, December, 280-96
15. Schultz, T. W. (1968): Education and Economic Growth, In *Social Forces Influencing American Education*, pp.46-88.
16. Permani, R. (2009): The Role of Education in Economic Growth in East Asia: A Survey, *Asia-Pacific Economic Literature*, 23(1): 1-20.
17. Stevens, P. and Weale, M. (2004): *Education and Economic Growth*, In Geraint Johnes and Jill Johnes (eds.) *International Handbook on Economics of Education*, Edward Elgar Publishing Ltd, Cheltenham, UK, Pp. 164-88.
18. Psacharopoulos, G. (1972): Measuring the Marginal Contribution of Education to Economic Growth, *Economic Development and Cultural Change*, 20(4): 641-658.
19. Psacharopoulos, G. (1988): Education and Development: A Review, *World Bank Research Observer*, 3(1): 99-116.
20. Lazear, E. P. (2001): Educational Production, *Quarterly Journal of Economics*, 116(3): 777-803.
21. Krueger, A. B. (1999): Experimental Estimates of Education Production Functions, *Quarterly Journal of Economics*, 114(2): 497-532.
22. Hanushek, E. A. (1986): The Economics of Schooling: Production and Efficiency in Public Schools, *Journal of Economic Literature*, 24(3): 1141-1177.
23. Monk, D. H. (1989): The Education Production Function: Its Evolving Role in Policy Analysis, *Educational Evaluation and Policy Analysis*, 11(1): 31-45.
24. Chizmar, J. F. and Zak, T. A. (1983): Modeling Multiple Outputs in Educational Production Functions, *American Economic Review*, 73(2): 18-22.
25. Johnson, J. L. (1978): The Role of the Student in the Higher Education Production Function, *Research in Higher Education*, 9(2): 169-179.
26. Psacharopoulos, G. (2006): The Value of Investment in Education: Theory, Evidence, and Policy, *Journal of Education Finance*, 32(2): 113-36.
27. Cohn, E. (1977): The Costs of Formal Education In The United States, 1950 – 1975, *Journal of Education Finance*, 3(1): 70-81.
28. Chandrasekhar, S. and Mukhopadhyay, A. (2006): Primary Education as a Fundamental Right: Cost Implications, *Economic and Political Weekly*, 41(35): 3797-3804.
29. Tsang, M. C. (1988): Cost Analysis for Educational Policymaking: A Review of Cost Studies in Education in Developing Countries, *Review of Educational Research*, 58(2): 181-230.
30. Nair, P.R.G. (1976): Effective Cost of Primary Education in India, *Economic and Political Weekly*, 11(38): 1536-1540.
31. Psacharopoulos, G. (1973): *Returns to Education: An International Comparison*, Elsevier Scientific Publishing Company, Amsterdam.
32. Angrist, J. D. and Krueger, A. B. (1991): Does Compulsory School Attendance Affect Schooling and Earnings? *Quarterly Journal of Economics*, 106(4): 979-1014.
33. Psacharopoulos, G. & Patrinos, H. A. (2004): Returns to Investment in Education: A Further Update, *Education Economics*, 12(2): 111-34.
34. Bennell, P. (1998): Rates of Return to Education in Asia: A Review of the Evidence, *Education Economics*, 6(2): 107-20.
35. Psacharopoulos, G. (1985): Returns to Education: A Further International Update and Implications, *Journal of Human Resources*, 20(4): 583-604.
36. Psacharopoulos, G. (1970): Estimating Shadow Rates of Return to Investment in Education, *Journal of Human Resources*, 5(1): 34-50.

37. Grossman, M. (1972): On the Concept of Health Capital and the Demand for Health, *Journal of Political Economy*, 80(2): 233-255.
38. Grossman, M. (1972): *The Demand for Health: A Theoretical and Empirical Investigation*, Columbia University Press, New York.
39. Grossman, M. (2000): The Human Capital Model, *Handbook of Health Economics*, CH.7, Elsevier, pp. 347 - 408.
40. Manning, W.G. et al (1987): Health Insurance and the Demand for Medical Care: Evidence from a Randomized Experiment, *The American Economic Review*, 77(3): 251-277.
41. Zweifel, P, and Manning, W. G. (2000): Moral Hazard and Consumer Incentives in Health Care, *Handbook of Health Economics*, Volume 1A, Elsevier, pp. 409 - 459.
42. Pauly, M. V. (1968): The Economics of Moral Hazard: Comment, *American Economic Review*, 58(3): 531-537.
43. Arrow, K. J. (1968): The Economics of Moral Hazard: Further Comment, *American Economic Review*, 58(3): 537-539.
44. Pollak, R. and Wachter, M. (1975): The Relevance of the Production Function and Its Implications for the Allocation of Time, *Journal of Political Economy*, 83(2), 255-77.
45. Rosenzweig, M. and Schultz, T. P. (1983): Estimating a Household Production Function: Heterogeneity, the Demand for Health Inputs, and Their Effects on Birth Weight, *Journal of Political Economy*, 91(5): 723-46.
46. Strauss, J. and Thomas, D. (1998): Health, Nutrition, and Economic Development, *Journal of Economic Literature*. 36(2), 766-817.
47. Sala-i-Martin, X. (2005): On the Health Poverty Trap," in Guillem Lopez-Casasnovas, Berta Rivera and Luis Currais eds. *Health and Economic Growth: Findings and Policy Implications*, MIT Press. READ section 2.
48. Miguel, E. (2005): Health, Education and Economic Development, in Guillem Lopez-Casasnovas, Berta Rivera and Luis Currais eds. *Health and Economic Growth: Findings and Policy Implications*, MIT Press.
49. Miguel, E. and Kremer, M. (2004): Worms: Identifying Impacts on Education and Health in the Presence of Treatment Externalities, *Econometrica*, 72 (1), 159-217.
50. Bloom, D., Canning, D. and Sevilla, J. (2001): The Effect of Health on Economic Growth: Theory and Evidence, NBER Working Paper 8587.
51. Canning, D (2006): The Economics of HIV/AIDS in Low-Income Countries: The Case for Prevention, *Journal of Economic Perspectives*, 20 (3), 121-142.
52. Edoardo G. (2003): The Economics of HIV/AIDS: A Survey, *Development Policy Review*, 21(1), 27-49.
53. Asian Development Bank (2004): Chapter 3: HIV/AIDS and Economic Development, in *Economics and Challenge of AIDS*.
54. Rout, H. S. (2011): *Health Care System: A Global Survey*, New Century Publications, New Delhi.
55. Dasgupta, M. (2005): Public Health in India: An Overview, WPS3787, The World Bank.
56. Dasgupta, M. (2005a): Public Health in India: dangerous Neglect, *Economic and Political Weekly*, 40(49): 5159-5165.
57. Mishra, S. (2005): Public Health Scenario in India, *India Development Report 2004-05*. Ed. Kirit Parikh and R. Radhakrishna, Oxford University Press, New Delhi, Pp. 62-83.
58. Zurbrigg, S. (2001): Re-thinking Public Health: Food, Hunger, and Mortality Decline in South Asian History, in I. Qadeer, K. Sen and K. R. Nayar (Eds.) *Public Health and the Poverty of Reforms: the South Asian Predicament*, Sage, New Delhi.
59. Qadeer, I. (2001): Impact of Structural Adjustment Programs on Concepts in Public Health, in I. Qadeer, K. Sen and K. R. Nayar (Eds.) *Public Health and the Poverty of Reforms: the South Asian Predicament*, Sage, New Delhi.
60. Sen, K. (2001): Health Reforms and Developing Countries? A Critique, in I. Qadeer, K. Sen and K. R. Nayar (Eds.) *Public Health and the Poverty of Reforms: the South Asian Predicament*, Sage, New Delhi.
61. Baru, R. V. (2001): Health Sector Reforms and Structural Adjustment: A State-level Analysis, in I. Qadeer, K. Sen and K. R. Nayar (Eds.) *Public Health and the Poverty of Reforms: the South Asian Predicament*, Sage, New Delhi.



## **Paper CEE201 Economics of Growth and Development**

### Module I

Theories of Economic growth: Neo-classical growth models of Solow and Meade; Mrs. Joan Robinson's growth model; Cambridge criticisms of Neo classical analysis of growth - Controversy on the measurement of capital.

### Module II

Growth models of Kaldor and Pasinetti, Technological Progress – Embodied and Disembodied, Optimal Economic Growth, Hicks- Harrod Neutrality Approach

### Module III

Production function approach to economic growth, Total factor productivity, Growth Accounting, Transitional Dynamics, Convergence Hypothesis, Golden Rule of Capital Accumulation.

### Module IV

Endogenous Growth, Intellectual Capital, Role of Learning, education and Research, Optimal savings and Ramsay model, Two sector Growth model of Ujawa

### Module V

Need for investment criteria in developing countries, Alternative investment criteria; Cost – benefit analysis, shadow prices, Project evaluation and UNIDO guidelines.

### Basic Reading List:

1. Todaro, M. P. (1994) Economic Development, Longman Publishing, New York.
2. Acemoglu, D. (1995) Introduction to Modern Economic Growth, Princeton University Press.
3. Jones, C. I. (2001), Introduction to Economic Growth, W.W. Norton & Company, New York.
4. Thirwal, A.P. (2003), Growth and Development: With special reference to Developing Economies, Palgrave MacMillan, New York.
5. Jones, H. G. (1984), Economic Growth, V.N. Reinhold Company, Ltd. England.
6. Barro, R. J. & Sala – I – Martin, X, (2004), Economic Growth, PHI, New Delhi.
7. Vanden – Burg, H (2001) Economic Growth and Development, Mc Graw Hill, New York.

## **Semester III Paper HCE301**

### **Basic Econometrics**

#### Module I

Meaning and scope of econometrics; Two variable linear regression model – its assumptions, estimation of parameters and properties of estimators; Gauss Markov Theorem, Coefficient of determination; Analysis of Variance of two variable LRM.

#### Module II

K – Variable LRM: Estimation of parameters, properties of estimators, Gauss – Markov theorem; Testing of significance of single co-efficient, Subset of Coefficients: ANOVA; Adjusted coefficient of determination.

#### Module III

Prediction in two – variable and K – Variable LRM; Multicollinearity - Nature, detection, consequences and remedy. Specification Errors and Measurement errors.

#### Module IV

Heteroscedasticity- Consequences, detection and remedy; Generalized Least square and weighted least square estimation; Auto-correlation: Detection, Consequences and remedy.

#### Module V

Dummy variable models: Estimation; Testing the structural stability of regression models; Interaction effects; Seasonal analysis; Piecewise Linear regression.

#### Basic Reading List:

1. Johnston (1991), “Econometric Methods”, Mc Graw Hill Book Co
2. Koutsoyiarnis, A, (1992) “Introduction to Econometrics” OUP
3. Dougherty, C. (1992) “Introduction to Econometrics” OUP.
4. Kminta, J (1997); “Elements of Econometrics”, University of Michigan Press
5. Gujarati, D & Sangeetha (2007); “Basic Econometrics”, Mc Graw Hill Book Co.

## **Paper CEE301 International Economics**

### **Module I: Pure Theories of International Trade**

Introduction to the International Economics, Trade Based on Absolute Advantage, Comparative Advantage and Opportunity Costs, Modern Trade Theories: – Heckscher – Ohlin theory of trade. Factor Price Equalisation theory, Stolper– Samuelson Theory, Rybczynski theorem, The Specific factors model

### **Module II: New Theories of International Trade and Gains from Trade**

Intra-Industry Trade, Imperfect Competition and Increasing Returns to Scale as determinants of Trade and gains from trade, Effect of changes in tastes, per capita income and technology on Trade and gains from trade, Terms of Trade: concepts, types, hypothesis of secular deterioration, Kravis Theory of Availability, Linder's theory, Posner's Imitation Gap theory, Vernon's Product Cycle Theory, Kenen's theory of Human capital, Emanuel's theory of Unequal Exchange, Growth and trade; Technical Progress and International trade.

### **Module III: The Theory of Interventions**

Tariffs (Partial and General Equilibrium analysis), Effective Rate of Protection and optimum tariff, Non-tariff trade barriers: Import Quotas, Voluntary Export restraints, International Cartels, Dumping, Export subsidies; Economic Integration: Customs Union

### **Module IV: Balance of Payments and Exchange Rates**

The Balance of Payments: Meaning and components of balance of payments; Equilibrium and disequilibrium in the balance of payments, the process of automatic adjustment; Expenditure–reducing and expenditure- switching policies and direct controls for adjustment, Elasticity estimates and the J-curve, Exchange Rate Determination: Purchasing-Power Parity Theory, The Monetary Model to Exchange Rates, Asset or Portfolio Model of Exchange Rates.

### **Module V:**

Policies for achieving internal and external equilibrium, Foreign trade multiplier with and without foreign repercussions and determination of national income and output; fixed exchange rates and flexible exchange rates, Optimum Currency Areas.

### **Basic Readings**

1. Chacholiades, Miltiades (1990), The Pure Theory of International Trade, McGraw Hill.
2. Krugman Paul R., Obstfeld Maurice and Melitz. International Economics, Pearson Education
3. Batra, Raveendra N. (1975), The Pure Theory of International Trade under Uncertainty, The Macmillan Press.
4. Bhagwati, J. (Ed.) (1981), International Trade: Selected Readings, Cambridge University Press.
5. Dana, M.S. (2000), International Economics: Study, Guide and Work Book, Routledge Publishers.
6. Dunn, R.M. and J.H.Mutti (2000), International Economics, Routledge Publishers, London.

7. Gandolfo Giancarlo, International Trade Theory and Policy, Springer.
8. Haberler, G. (1937), The Theory of International Trade, Macmillan & Co.
9. Heller, H. Robert (1968), International Monetary Economics, Prentice-Hall of India.
10. Kenen, Peter B. (1989). The International Economy, Prentice-Hall of India Pvt. Ltd.
11. Kindleberger, C.P. (1977). International Economics, D.B. Taraporevala Sons & Co.
12. Meade, James Edward (1952). A Geometry of International Trade, George Allen and Unwin.
13. Neihans, J. (1984). International Monetary Economics, John Hopkins University Press.
14. Roy, P.N. (1986). International Trade: Theory and Practice, Wiley Eastern.
15. Salvatore, D. (1997). International Economics, Prentice Hall.
16. Sodersten, Bo (1991). International Economics, The Macmillan Press.

## **Paper CEE301 International Economics**

### Module I

The pure theory of international trade – Theory of comparative advantage, comparative cost, and Empirical testing of theory of comparative cost – Modern Trade Theory – Heckscher – Ohlin theory of trade. Role of dynamic factors, i.e., changes in tastes, technology and factor endowments in explaining the emergence of trade: the Rybczynski theorem – concept and policy implications of immiserizing growth

### Module II

Measurement of gains from trade and their distribution; Concepts of terms of trade, their uses and limitations; Hypothesis of secular deterioration of terms of trade, its empirical relevance and policy implications for less developed countries; Trade as an engine of economic growth; Welfare implications – Empirical evidence and policy issues.

### Module III

The Theory of Interventions (Tariffs, Quotas and non-tariff barriers); economic effects of tariffs and quotas on national income, output, employment, terms of trade, income distribution; both in partial and general equilibrium analysis. The political economy of non-tariff barriers and their implications; nominal effective and optimum rates of tariffs – their measurement, impact and welfare implications; Trade under imperfectly competitive market.

### Module IV

Meaning and components of balance of payments; Equilibrium and disequilibrium in the balance of payments; the process of adjustment under systems of gold standard, fixed exchange rates and flexible exchange rates; Expenditure – reducing and expenditure-switching policies and direct controls for adjustment.

### Module V

Policies for achieving internal and external equilibrium simultaneously under alternative exchange rate regimes; A critical review of the monetary approach to the theory of balance of payments adjustment; Foreign trade multiplier with and without foreign repercussions and determination of national income and output; Relative merits and demerits of fixed and flexible exchange rates in the context of growth and development in developing countries.

### Basic Reading List:

1. Soderston B.O, “International Economics”
2. Soderston & Reed, “International Economics”
3. Salvator. D, “International Economics”
4. Krugman P. D “International Economic Theory & Policy”

## **Paper AEE301 Agricultural Economics**

### Module I

Nature and scope of agricultural economics, Role of agriculture in economic development, Economic growth & sectoral dynamics, Theories of agricultural development. Schultz, Mellor, Boserup, Lewis & Ranis- Fei Model. Types of farming & Farm organization.

### Module II

Agricultural production and productivity – measures of farm efficiency production function analysis – Factor use and resource substitution, size of farms and productivity – theoretical and empirical issues. Tenancy & share cropping – Efficiency & equity issues.

### Module III

Labour supply in agriculture & inter-locking of factor markets, Agricultural wage: Determinants & implications, marginalization of rural labour, Role of technology in agriculture – technical efficiency and labour absorption. Agriculture and environment – Sustainability issues in agriculture

### Module IV

Agriculture price policy – objectives, product price & factor price – issue of subsidies in agriculture, terms of trade between agricultural and industry – implications and Indian experiences. Agricultural marketing and measures to improve efficiency in agricultural marketing in India. Instability in agriculture - Price instability & cob-web model. Agricultural Credit Risk & uncertainty in farming and crop insurance – Indian experience.

### Module V

Agriculture & Rural Development – Farm and Non-farm employment- trends and determinants, role of planning and need for state intervention. Liberalisation in Indian Economy - Globalization, New Economic Policy and agriculture, Liberalization of trade and impacts – Role of W.T.O., MNCs and FDI – impacts on Indian agriculture.

Basic Reading List:

1. Bhaduri. A. (1984). The Economic Structure of Backward Agriculture, Macmillan, Delhi.
2. Gulati. A. and T. Kelly (1999). Trade Liberalization and Indian Agriculture, Oxford University Press, New Delhi.
3. Rao. C. H. Hanumanatha (1975), Agricultural Growth, Rural Poverty and Environmental Degradation in India, oxford University Press, New Delhi.
4. Rudra. A. (1982), Indian Agricultural Economics: Myths and Reality, Allied Publishers, New Delhi.
5. Saini, G. R. (1979), Farm Size, Resource Use Efficiency and Income Distribution, Allied Publishers, New Delhi.
6. Bardhan, P. (1984), Land, Labour and Rural Poverty, Oxford University Press, New Delhi.
7. Chadha, G. K. and A. N. Sharma (1997), Growth, E mployment and Poverty: Change and Continuity in Rural India, Vikas Publishing, New Delhi.
8. Ghatak. S. and K. Ingerscent (1984), Agriculture and Economic Development, Select books, New Delhi.
9. Bhalla G. S. and G. Singh (2012) Economic Liberalisation and Indian Agriculture – A District level Study, Sage Publications, new Delhi.
10. Frank Ellis (1993), Peasant Economics, 2<sup>nd</sup> Edition, Cambridge University Press.
11. B. L. Gardner & G .C. Rausser (eds) 2001, Handbook of Agricultural Economics, Vol. I.A, Elsevier, Amsturdaron.
12. R. Evenson & P. Pingali (eds.) 2007, Handbook of Agricultural Economics, Vol. 3, Amsterdam.
13. Pranab Bardhan (1983), Land, Labour & Rural Poverty, Oxford University Press (O.U.P.)
14. (1989) The Economic theory of Agricultural institutions, O.U.P.
15. Debraj Ray (1998), Development Economics, O.U.P.

## **Paper FEE301 International Finance**

### Module I

The International Finance: nature, scope and Importance of International Finance, International Transactions and the financial Markets; The International Monetary System; International Financial Markets and Instruments.

### Module II

Exchange rate mechanism: spot and forward markets; Foreign exchange Markets: Forwards; market for currency futures and options; Financial Swaps: Interest rate and currency Swap.

### Module III

Exchange rate determination: theory of Evidence and Policy; Purchasing Power Parity and floating Exchange Rate Experience. Monetary Models of Exchange Rate Determination; The Portfolio Balance Model; Exchange Rate Determination and forecasting.

### Module IV

Exposure and risk: Hedging, Speculation and Management of transactions Exposure; Management of Operating Exposure. Management of Interest Rate Exposure – FRA's Interest Rate Caps and Floors;

### Module V

International working capital management: working capital policy, management of cash, short term marketable securities, bill receivables, inventory; financing of current assets; financing of foreign trade, modes of payment, methods of trade financing.

### Basic Reading List:

1. Apte, P.G.(1995): "International Finance Management"; Tata McGraw-Hill Publishing. Co. Ltd, New Delhi.
2. Levi, M.D. (1990) "International Finance" McGraw-Hill Publishing Company.
3. Levi, M.D.(1996) "International Finance" McGraw-Hill, Inc, New Delhi.
4. Kevin, S. "Fundamentals of International Financial Management" PHI, Learning Pvt. Ltd, New Delhi.
5. Click, R.W & Coval, J.D "The Theory and Practice of International Financial Management" Pearson Education.
6. Avadhani, V.A. "International Financial Management" Himalayan Publishing House.
7. Pibeam, K (1998): "International Financial" Mcmillan Press Ltd. London.
8. Shapiro, A.C. (1995): "Multinational Financial Management"; Prentice. Hall of India Pvt. Ltd.
9. Rodriguez, M.R. "International Financial Management" Prentice Hall Inc.
10. Sharan. V, "International Financial Management" PHI Learning Pvt. Limited.



## **Paper FEE302**

### **Computer Application in Economics**

#### **Module I: Fundamentals of Research**

Research – meaning, Characteristics, objectives, types, process; criteria for a good research; planning a research project; Challenges of social science research; Statement of problem; & current trends, Review of literature: meaning, objectives, types, sources, stages and precautions; How to write review of literature chapter? Practical on review of literatures

#### **Module II: Ethics: Protecting human subjects and research integrity**

Definition of ethics; General ethical principles; Ethical Guidelines for Social Sciences Research in Health adopted by GoI; Plagiarism: Meaning and types; Why do people plagiarized? How to avoid it?

#### **Module 3: SPSS I**

Basics of SPSS, Open and save SPSS data and output files, entering data, import of data from excel, Create new variables, Recode variables, aggregate data, filter data, edit charts, Frequency tables, cross tabulations, summary statistics

#### **Module 4: SPSS II**

Generate Box Plot, Histogram, Normal density curves, Scatter plot Regression Analysis using SPSS

#### **Module 5: STATA**

Basics of STATA, Open STATA, save data and output files, import data, create new variables Generate Box Plot, Histogram, Normal density curves, Scatter plot and Regression analysis using STATA

References:

## **SEMESTER IV**

### **Paper CEE401 Economics of Environment**

#### **Module 1**

Pareto optimality and competitive equilibrium; Fundamental theorems of welfare economics; Externalities and market inefficiency- externalities as missing markets; property rights and externalities. Non-convexities and externalities; Environment as public good, Environmental externalities- Pigouvian taxes and subsidies, marketable pollution permits and mixed instruments ( the charges and standards approach), Coase's bargaining solution and collective action.

#### **Module 2**

Global environmental externalities and climatic change – Tradable pollution permits and international carbon tax. Trade and environment in WTO regime. Informal regulation and the new model of pollution control. Monitoring and enforcement of environmental regulation. Environmental institutions and grass root movements; Cooperative Solution to Common Property resources.

#### **Module 3**

Use values; Option values and non-use values; Valuation methods – methods based on observed market behaviour; Hedonic property values and household production models (travel cost method and household health production function), Methods based on response to hypothetical markets, contingent valuation methods.

#### **Module 4**

Theories of optimal use of exhaustible and renewable resources; Environmental Kuznet Curve and its critique. The concept of sustainable development; strong and weak sustainability; Integrated environmental and economic accounting and the measurement of environmentally corrected GDP; Macroeconomic policies and environment.

#### **Module 5**

Mechanism for environment regulation in India; environmental laws and their implementation; Policy instruments for controlling water and air pollution and forestry policy; People's participation in the management of common and forest lands. The institutions of joint forest management and the joint protected area management; social forestry-rationale and benefits.

### **Basic Reading List**

1. Kolstad, Charles D.(2010) 'Environmental Economics'. 2<sup>nd</sup> Edition. Oxford University Press.
2. Bhattacharya, Rabindranath (2001) 'Environmental Economics: An Indian Perspective'. Oxford University Press.
3. Samuelson, Paul, A. (1995): Diagrammatic exposition of a Theory of Public Expenditure'. The Review of Economics and Statistics, 37(4), November, pp.350-356.
4. Bator, Francis, M. (1958) 'The Anatomy of Market Failure'. The Quarterly Journal of Economics, 72(3), August, pp. 351-379.
5. Buchanan, James, M. and Stubblebine, Craig, Wm (1962) 'Externality'. Economics. New Series, 29(116), November, 371-384.
6. Mishan, J. E. (1971): The Postwar Literature on Externalities: An Interpretative essay'. Journal of Economic Literature. 9(1). March, pp. 1-28.
7. Baumol, William, J. and Oates, Wallace, E. (1988). The Theory of Environmental Policy, Second Edition, Cambridge University Press, Cambridge.
8. Coase, Ronald, H. (1960) 'The Problem of Social Cost', Journal of Law and Economics, 3, October, pp. 1-44.
9. Markandya Anil and Richardson, Julie (ed.) (2005): Environmental Economics, Earthscan Publications, London.
10. Ostrom Elinor (1997) 'Governing the Commons; The Evolution of Institutions for Collective Action, Cambridge University, Cambridge.
11. Shiva, Vandana et. Al (1997) 'The Enclosure and Recovery of the Commons. Research Foundation for Science, Technology and Ecology, New Delhi.
12. Grossman, Gene, M. and Krueger, Allan, B. (1994) 'Economic Growth and the Environment' NBER Working paper 4634.
13. Baland, Jean-Marie and Jean-Philippe Platteau (1996) 'Halting degradation of natural resources: *Is there a Role for Rural Communities?* Published by Food and Agriculture Organization of the United Nations
14. Dasgupta, Partha and Karl-Goran Maler (1997) 'The Environment and Emerging Development Issues'. Clarendon Press

### **Paper CEE402 Dissertation**

Presentation: 50 Marks and Hardcopy of Dissertation: 50 Marks

## **Paper AEE401 Financial Institutions and Market**

### Module I

The structure of the financial system- Functions of the financial sector- Indicators of financial development-Equilibrium in Financial Markets, Financial System and Economic Development. The Concept of Risk and Return - its type, Risk and financial assets, Risk and return on assets, Risk-Return trade off-Valuation of Securities.

### Module II

Theories of interest rate determination-Level of interest rates-Long period and short period rates- Term Structure of Interest rates: Administered interest rates- Appropriate interest rate policy. Development banks- role and functions, Merchant banking; Financial sector reforms in India.

### Module III

Functions of Central Bank- the aims and objectives of the monetary policy in developing countries-Instruments and effectiveness of monetary policy. Proliferation of banking -Credit creation and its control; Balance Sheet Analysis, Profitability and efficiency of banks.

### Module IV

Role and structure of money market and capital market, Primary and secondary market for securities. Depository system, SEBI; its functions in capital market of India; Non-banking financial institutions- Measures taken to control their operations.

### Module V

Non-Banking Financial Companies: concepts of leasing: History and development, problems and prospects; concepts of Hire purchase Companies; origin of Venture Capital Companies, its importance. Insurance Sector: Objectives, functions, IRDA and its role and functions in financial markets.

### Basic Reading List

1. M.Y.Khan-Indian Financial System, Tata McGraw Hill, New Delhi.
2. L.M.Bhole: Financial institutions and Market, Tata McGraw hill, New Delhi.
3. Gorden & Natrajan: Financial Market and institutions, Himalaya Publishing house.
4. S. B. Gupta- Monetary Economics.
5. Mishkin FS & Eakins S. G, Financial Market and institutions, PE, New Delhi.

## **Paper AEE402 Mathematical Economics**

### Module I

Utility Function – Direct and Indirect, Roy's Identity, N-M Utility Function. Concept of elasticities, separable and additive utility function, homogeneous and homothetic utility function, , Linear Expenditure system, Index Number.

### Module II

CES Production Function, VES and translog production function, Shephard's Lemma, Input demand function, Adding up theorem, Technical progress through Production function, Empirical uses of production function analysis.

### Module III

Single market equilibrium – Marshallian and walrasian equilibrium condition, lagged market equilibrium, multimarket equilibrium General equilibrium system of walras and Debreu, Stability of the conditions of equilibrium.

### Module IV

Linear Programming – Primal and dual problems, Duality Theorms ,Simplex method and Revised simplex method; parametric linear programming ; Linear Fractional programming; Non Liner Programming & Khun – Tucker Condition (KTC )

### Module V

Dominance property; Arithmetic method for nxn Games; General solution of mxn rectangular games, co-operative & non-cooperative games

#### Basic Reading List:

1. Silberberg, E & Suen, W (2001), The Structure of Economics; A Mathematical Approach, Mc Graw Hill Co., New York.
2. Ching, A. C. & Wainwright , K (2005), Fundamental Methods of Mathematical Economics, Mc Graw Hill Co., New York.
3. Sydsaeter, K & Hammond, P. J (1995), Mathematics for Economic Analysis, Pearson Education.
4. Gass, S. I. (1958), Linear Programming ; Methods and Applications, Mc. Graw Hill Pub.
5. Kundu K. B. (1971), Welfare Economics; An Introductory Analysis, Nababharat Publishers, Kolkata.
6. Baldani, Bradfield , Turner (2009) An Introduction to Mathematical Economics, Cengage Learning, New Delhi.
7. Renshaw, G. (2009) Mathematics for Economics, Oxford University Press, New York.

## **Paper AEE 403 Advanced Econometrics**

### Module I

Dummy dependent variable models: Estimation using LPM, Logit, Probit and Tobit models; Multivariate normal Probability distribution – its properties; Hotelling T distribution.

### Module II

Autoregressive and distributed lag models – Koyek's model, Partial Adjustment model, Adaptive expectation model; Instrumental Variables; Almon's approach to distributed lag models; Causality test – Granger test, Sim test.

### Module III

Simultaneous equations models – Introduction and examples; the simultaneous equation bias and inconsistency of OLS estimators; The Identification problem – Rules of identification – Order and rank conditions; Methods of estimation of Simultaneous equation model – Recursive method, ILS, 2SLS. System method of estimation of Simultaneous equation models – 3SLS.

### Module IV

Discriminant Analysis, Principal Component Analysis, Factor Analysis, Cluster analysis. Panel data techniques – Fixed effect model, Random effect model, Random Coefficient model.

### Module V

Time Series Econometrics – Stationarity, Tests of Stationarity, Unit root, Spurious regression and co-integration, Dickey Fuller test, Engle – Granger test, Random walk model; Forecasting with ARIMA model, Box- Jenkins methodology, Vector auto regression, Problems with VAR modeling – Applications.

### Basic Reading List:

1. Johnston (1991), "Econometric Methods", Mc Graw Hill Book Co
2. Koutsoyiarnis, A, (1992) "Introduction to Econometrics" OUP
3. Dougherty, C. (1992) "Introduction to Econometrics" OUP.
4. Kminta, J (1997); "Elements of Econometrics", University of Michigan Press
5. Gujarati, D & Sangeetha (2007); "Basic Econometrics", Mc Graw Hill Book Co.

## **Paper AEE 404**

### **Economics of Gender and Development**

#### Module I

Gender and Development-Concepts, Patriarchy, Caste, Kinship and implications on gender, Gender in mainstream Economics- WID, WAD and GAD approach in development- Basic Needs and Capability Approach. HDI, GDI and GEM, Empowerment of women: concept and implications.

#### Module II

Demography and female population- Age structure and sex ratio, Mortality and fertility rates and declining sex ratio with special reference to India. Gender in ownership and access to resources, intra household distribution and decision making; Property rights and land rights for women and implications, Historical trends, land reforms and current provisions; Women and environment: WED and Eco feminism, Climate change, women and sustainable development

#### Module III

Women and work - concepts and valuation: visible and invisible, productive and unproductive, paid and unpaid work; Economic participation of women in pre-industrial and industrial societies. Women in labour market-supply and demand for female labour, female work participation developing countries with special reference to India, agricultural and non agricultural activities. Women in formal and informal sector; Gender wage differential- Theories of wage discrimination and differentials and use of time- use survey

#### Module IV

Gender Issues in Poverty - Women and poverty, feminization of poverty, Inclusive growth and development, Gender inequalities: Access to education, health and other public services; Social security and Insurance, entitlements and social justice; Women and access to finance: Micro finance and self help groups; Women empowerment – concept and indicators; Development, Migration and women, Technology and women: ownership, access and implications on gender inequality

#### Module V

Globalization and Gender in Neo Liberal economics, Smart Economics and Women in Development Institution framework - engendering development, Women and macroeconomic policies, Decentralization of governance and empowerment of women in India; Gender budgeting with special reference to India

## **Readings:**

1. Boserup, E ( 1970): Women's role in Economic Development, George Allen and Unwin, London
2. Seth, M. (2000): Women and Development: the Indian Experience, Sage Publications, New Delhi.
3. Venkateswaran, S. (1995): Environment, Development and Gender Gap, Sage Publications, New Delhi.
4. Kabeer, N. (1994): Reversed Realities: Gender Hierarchies in Development Thought, Kali for Women, New Delhi.
5. Nussbaum, M. (2000): Capability Approach and Human Development, Cambridge University Press.
6. Mies, M. (1998): Patriarchy and Accumulation on a World Scale: Women in the International Division of labour, Zed Book, London.
7. Agnihotri, S. B. (2000): Sex ratio in Indian Population: A Fresh Exploration, Sage Publications, New Delhi.
8. Agarwal, B. (1994): A Field of One's Own: Gender and Land Rights in South Asia, Cambridge University Press
9. Sen, A. K. (1990): Gender and Cooperative Conflicts, in Tinker (Ed) 'Persistent Inequalities: Women and World Development', Oxford University Press, New York.
10. Amsden, A. H. (Ed.) (1980): The Economics of Women and Work, Penguin Publications.
11. ILO (1998): Women's Participation in the Economic Activity of Asian Countries, Geneva.
12. Papola, T. S. and A. N. Sharma (Eds.) (1999): Gender and Employment in India, Vikas Publishing House, New Delhi.
13. Schultz, T. P. (1988): Education Investments and Returns, in Chenry, H. B. and T. N. Srinivasan, Handbook of Development Economies North Hollnad, New York.
14. Ahmed. I. (Ed.) (1985): Technology and Rural Women: Conceptual and Empirical Issues, George Allen and Unwin, London.
15. Jhabwala, R. and R. K. Subramanya (Eds) (2000): The Unorganized Sector: Work Security and Social protection, Sage Publications, New Delhi.
16. Narasimhan, S. (1999): Empowering Women: An Alternative Strategy from Rural India, Sage Publications, New Delhi.
17. Purushothaman, S. (1998): The Empowerment of Women in India: Grassroots Women's Network and the State, Sage Publications, New Delhi.
18. Jacobs, Jerry, A. (1995): Gender Inequality at Work, Sage Publications
19. Chopra, Kanchan (): Women and Migration, Sage Publications, New Delhi.



**Paper AEE 405**  
**Financial Inclusion and Economic Development**

**Module I: Inclusive Growth**

Inclusive Growth: Concept, Relevance and its Salient Features. Inclusive Growth in India, Financial Inclusion: Concept, Rationale; Financial Inclusion in India; Relationship between Financial Inclusion and Development Indicators

**Module II: Banking and Financial Inclusion**

Role of Banking System in Financial Inclusion, Financial Inclusion and Social Banking, Regional Rural Banks, Cooperative Credit Institutions, Technology Applications in Banking Sector

**Module III: Rural Banking**

Rural Credit, Demand and Supply Side Analysis, Institutional Mechanism in India, Government Policies for Promoting Rural Credit, Micro Finance: Institutions and Mechanisms, Credit to SHGs, Growth, Prospectus and Challenges, Policy Measures; Farm and Non-farm credit.

**Module IV: Finance and Employment**

Effects of Financial Development on Labour Market Equilibrium, Micro Enterprise Models, Finance and Employment, Microenterprise in India and Odisha, Credit for MSME: Sector-wise Growth Trends.

**Module V: Insurance**

Moral Hazard and Adverse Selection Problem in Insurance Market; Benefits and Costs of Insurance, The Moral Foundations of Universal Health Insurance, Evolution of Insurance Market in India. Reforms in Indian Insurance Market

**Reading List**

- Karmarkar K G, G D Banerjee and N P Mohapatra (2011) Towards Financial Inclusion in India, Sage Publication
- Desai, Vasant (2005) Rural Development in India, Himalaya Publishing House
- Rohtagi (2010) Rural Banking & Overdues Management, Cyber Tech Publications
- Patnaik UC and R.N. Mishra (1999) Rural Banking in India, Anmol Publications
- Bhatnagar Amitabh (2008) Rural Micro finance & Microenterprise, Concept Publishing Co
- A. K. Sohani (2009) Financial Inclusion: Perspectives and Country Experiences , ICFAI
- Sujatha B (2007) : Financial Inclusion: Concepts and Strategies, ICFAI
- Kocchar S, K C Chakrabarty and C Rangarajan: Speeding Financial Inclusion, Academic Foundation
- Sundaram I. S, (2015), Rural Development, Himalaya Publishing House

# **Paper Code AEE406 Economics of Discrimination**

## **Module I: *Social identity shaping economic outcomes:***

Models of statistical and taste based discrimination; Caste-code-based economy and its implications; Simplistic applications of the statistical and taste based discrimination along gender lines

## **Module II: *A short introduction to the caste system:***

A brief overview of origin of caste in India – the varna and jati systems, the official treatment of caste groups, stigmatized ethnic identity of SCs from an academician's perspective

## **Module III: *Identity and Economic outcomes: techniques of estimating discrimination***

a) Decomposition analyses – OLS regression and Quantile regression techniques, application of the techniques in the Indian scenario, variation in results across time, professions, markets and sectors

b) Experimental methods to investigate labour market discrimination – audits and correspondence methods as tools of investigation, application across contexts, relative merits and demerits of the alternative experimental methods, advantages over econometric evaluations

c) Beyond the labour market – the Duncan index, ethnic segregation in residential spaces, social identity and student performance and confidence, ethnicity and professions

## **Module IV: *Remedies for inter group disparity: affirmative action and compensation issues***

Affirmative action as a remedy to discrimination, standard criticisms of affirmative action programs, some studies on evaluating criticism of affirmative action in India

## **Module V: *Gender discrimination and the gender caste overlap***

Feminisation of labour force and allied issues, overlapping of caste and gender and the Gender-Caste Development Index – an Indian perspective, improving status of women

## **Essential readings**

Module I:

1. Akerlof, George: “The economics of caste and of the rat race and other woeful tales”, in *An Economic Theorist's book of tales*, Cambridge University Press, 1984, models of statistical discrimination and the caste economy.

2. Coate, Stephen and Glenn Loury (1993): “Will affirmative action policies eliminate negative stereotypes”, *American Economic Review*, Vol. 83, No. 5, pp. 1220-1240
3. Becker, Gary: “The economics of discrimination”: Chs. 1, 2 and 10
4. Akerlof, George A. and Rachel Kranton (2010): *Identity Economics: how our identities shape our work, wages and well-being*, Princeton University Press, Chs. 1-4
5. Eswaran, Mukesh (2014): “Why Gender Matters in Economics”, Princeton University Press, Ch. 4 (cross-referenced in Section V)

Module II:

1. Deshpande, Ashwini (2011): “The Grammar of Caste: Economic Discrimination in Contemporary India”, Oxford University Press, New Delhi.
2. Thorat, Sukhadeo (1979): “Passage to Adulthood: perceptions from below” in Sudhir Kakkar (editor), *Identity and Adulthood*, Oxford University Press, pp. 65-81

Module III a:

1. Banerjee, Biswajit and Knight, J.B. (1985): “Caste discrimination in the Indian urban labour market”, *Journal of Development Economics*, Vol 17, pp 277-307.
2. Cotton, J (1988): “On the decomposition of wage differentials”, *Review of Economics and Statistics*, Vol. 70, No.2
3. Madheswaran, S. and Paul Attewell (2007): “Caste discrimination in the Indian urban labour market”, *Economic and Political Weekly*, Vol. XLII, No. 41, October 13, 2007,
4. Koenker, Roger and Kevin F. Hallock (2001): “Quantile Regression”, *Journal of Economic Perspectives*, Vol 15, No. 4, pp. 143-156
5. Deshpande, Ashwini and Smriti Sharma (2014): “Is Self-Employment the Answer to Caste Discrimination? Decomposing the Earnings Gap in Indian Household Non-farm Business”, Centre for Development Economics, Working Paper No. 236, February 2014.

Module III b:

1. Bertrand, M. and Mullainathan, S. (2004) “Are Emily and Greg more employable than Lakisha and Jamal? A field experiment on labour market discrimination”, *American Economic Review*, 94 (4): 991-1013
2. Thorat, Sukhadeo and Paul Attewell (2007): “The legacy of social exclusion: A correspondence study of job discrimination in India”, *Economic and Political Weekly*, Vol. XLII, No. 41, October 13, 2007.
3. Pager, Devah and Bruce Western (2005): “Race at Work: realities of race and criminal record in the NYC job market”, Report for NY City Human Rights Commission, 50th Anniversary conference.

4. Pager, Devah and Lincoln Quillian (2005) "Walking the Talk: What Employers Say Versus What They Do." *American Sociological Review* 70(3): 355-380
5. Deshpande, Ashwini and Katherine Newman (2007): "Where the path leads: role of caste in post university employment expectations", *Economic and Political Weekly*, Vol. XLII, No. 41, October 13, 2007, pp. 4133-4140.
6. Jodhka, Surinder and Katherine Newman (2007): "Meritocracy, Productivity and the Hidden language of Caste", *Economic and Political Weekly*, Vol. XLII, No. 41, October 13, 2007.

Module III c:

1. Hoff, Karla and Priyanka Pandey (2006): "Discrimination, Social Identity and Durable Inequalities", *American Economic Review*, Vol. 96, No.2, May, pp. 206-211
2. Vithayathil, Trina and Gayatri Singh (2012): "Spaces of Discrimination: residential segregation in Indian cities", *Economic and Political Weekly*, Vol. XLVII, No. 37, pp. 60-66.
3. Nafziger, E.W. (1975): "Class, caste and community of South Indian Industrialists: An examination of the Horatio Alger Model" *Journal of Development Studies*, Vol. 11, no. 2, January, pp. 131-48.

Module IV:

1. Deshpande, Ashwini (2013): "Affirmative Action in India", *Oxford India Short Introductions*, OUP, New Delhi.
2. Galanter, Marc (1997), "Pursuing Equality: An Assessment of India's Policy of Compensatory Discrimination for Disadvantaged Groups" in Sudipta Kaviraj (ed.) *Politics in India* Delhi: Oxford University Press, pp. 187- 199.
3. Deshpande, Ashwini and Thomas Weisskopf (2010): "Does Affirmative Action affect productivity in Indian Railways", *World Development*,
4. Bertrand, Marianne, Rema Hanna and Sendhil Mullainathan (2010): "Affirmative Action in Education: evidence from engineering college admissions in India", *Journal of Public Economics*, Elsevier, vol. 94(1- 2), pages 16-29.

Module V:

1. Deshpande, Ashwini (2007): "Overlapping identities under liberalisation: gender and caste in India", *Economic Development and Cultural Change*, Volume 55, No. 4, July 2007, pp.735-760
2. Standing, Guy (1989): "Global Feminisation through flexible labour", *World Development*, Vol.17, No. 7, pp. 1077 – 1095.

3. Elson, Diane (1999): “Labour markets as gendered institutions: equality, efficiency and empowerment issues”, *World Development*, Vol. 27, No. 3, pp. 611-627.
4. Eswaran, Mukesh (2014): “Why Gender Matters in Economics”, Princeton University Press, Ch. 4 and 11
5. Akerlof, George A. and Rachel Kranton (2010): *Identity Economics: how our identities shape our work, wages and well-being*, Princeton University Press, Chs. 7

## Paper Code AEE407 FINANCIAL ECONOMICS

### Unit I: Investment Theory

Introduction to financial economics, Time Value of Money: Future Value, Present Value, Future value of an annuity, Present value of annuity, Present rate of perpetuity. Investment Criteria: Net Present Value, Benefit Cost Ratio, Internal Rate of Return, Modified Internal Rate of Return, Pay-back period

**Unit II Valuation of Securities:** Fundamentals of Valuation of Securities: Valuation of Bonds and Stocks; Bond Yield, Yield to Maturity. Equity Valuation: Dividend Discount Model, The P/E Ratio Approach; Irrelevance of Dividends: Modigliani and Miller Hypothesis; Relevance of Dividends: Walter's Model, Gordon's Model.

### Unit III: Risk and return

Risk and Return: Historical returns and Risk, computing historical returns, average annual returns, variance of returns, Types of risk, Measurement of Risk and Return of an asset, Measurement of Risk and Return of a Portfolio, Determinants of Beta, Risk-Return trade off. Analysis of financial statement: Ratio Analysis, Different Kinds of Financial Ratios, Calculation and its importance in financial analysis.

### Unit IV: Derivative Markets

An introduction to financial derivatives: Types and uses of derivatives; Forward Contracts: basic concepts, determination of forward prices, Futures Contract: basic concepts, theories of future prices- the cost of carry model, the expectation model, capital asset pricing model. Relation between Spot and Future Prices, forward vs future contract, Hedging in Futures;

### Unit V: Options and Swaps

Options: types, value of an option, the Pay-Offs from Buying and Selling of Options; the Put Call Parity Theorem; Binomial option pricing model (BOPM) and Black-Scholes option pricing model. Swaps: types, advantages and disadvantages

### Readings:

1. David G. Luenberger, *Investment Science*, Oxford University Press, USA, 1997.
2. Hull, John C., *Options, Futures and Other Derivatives*, Pearson Education, 6<sup>th</sup> edition, 2005.
3. Thomas E. Copeland, J. Fred Weston and Kuldeep Shastri, *Financial Theory and Corporate Policy*, Prentice Hall, 4th edition, 2003.
4. Richard A. Brealey and Stewart C. Myers, *Principles of Corporate Finance*, McGraw-Hill, 7th edition, 2002.
5. Stephen A. Ross, Randolph W. Westerfield and Bradford D. Jordan, *Fundamentals of Corporate Finance*. McGraw-Hill, 7th edition, 2005.
6. Burton G. Malkiel, *A Random Walk Down Wall Street*, W.W. Norton & Company, 2003.
7. William Sharpe, Gordon Alexander and Jeffery Bailey, *Investments*, Prentice Hall of India, 6th edition, 2003.