

**REVISED SYLLABUS FOR
POST GRADUATE DEGREE IN ECONOMICS
UNDER
CHOICE BASED CREDIT SYSTEM (CBCS)**

2015



**DEPARTMENT OF ECONOMICS
MIZORAM UNIVERSITY**

COURSE STRUCTURE
Semester-I: 22 Credits; FC=4, CC=18 credits

Course Code	Name of Course	Type of Course	Credit distribution			Total Credits	Marks (scaled)
			L	T	P		
Eco/1/FC/01	Basic Principles of Economic Theory	FC	1	1	0	2	100
Eco/1/FC/02	Basic Data Analysis	FC	1	1	0	2	100
Eco/1/CC/01	Industrial Economics	CC	2	1	0	3	100
Eco/1/CC/02	Microeconomic Analysis-I	CC	3	1	0	4	100
Eco/1/CC/03	Macroeconomic Analysis-I	CC	3	1	0	4	100
Eco/1/CC/04	Mathematical Techniques for Economic Analysis	CC	3	1	0	4	100
Eco/1/CC/05	Indian Economic Policy	CC	2	1	0	3	100

Semester-II: 22 Credits; FC=4, CC=16, OE=2 credits

Course Code	Name of Course	Type of Course	Credit distribution			Total Credits	Marks (scaled)
			L	T	P		
Eco/2/FC/03	National Income Accounting	FC	1	1	0	2	100
Eco/2/FC/04	Budgetary Theory and Practices	FC	1	1	0	2	100
Eco/2/CC/06	Microeconomics Analysis – II	CC	3	1	0	4	100
Eco/2/CC/07	Macroeconomics Analysis – II	CC	3	1	0	4	100
Eco/2/CC/08	Public Economics	CC	3	1	0	4	100
Eco/2/CC/09	International Trade & Finance	CC	3	1	0	4	100
Eco/2/OE/01	Statistical Techniques and Tools for Research	OE	2	0	0	2	100

Semester-III: 22 credits (CC=12, SC=8, OE=2)

Course Code	Name of Course Type of course	Type of Course	Credit distribution			Total Credits	Marks (scaled)
			L	T	P		
Eco/3/CC/10	Economic Development and Policy in North East India	CC	2	1	0	3	100
Eco/3/CC/11	Economics of Social Sector	CC	2	1	0	3	100
Eco/3/CC/12	Techniques of Statistical Analysis	CC	2	1	0	3	100
Eco/3/CC/13	Economics of Environment	CC	2	1	0	3	100
Eco/3/SC/01-A Eco/3/SC/01-B	Economics of Growth & Development- I/ Labour Economics-I	SC	3	1	0	4	100
Eco/3/SC/02-A Eco/3/SC/02-B	Agriculture Economics- I/Econometrics-I	SC	3	1	0	4	100
Eco/3/OE/02	Women and Development	OE	1	1	0	2	100

Semester-IV: 22 credits (CC=14, SC=8,)

Course Code	Name of Course Type of course	Type of Course	Credit distribution			Total Credits	Marks (scaled)
			L	T	P		
Eco/4/CC/10	Demography	CC	2	1	0	3	100
Eco/4/CC/11	Financial Markets & Institutions	CC	2	1	0	3	100
Eco/4/CC/12	Dissertation/Viva Voice	CC	2	1	0	8	100
Eco/4/SC/03- A Eco/4/SC/03- B	Economics of Growth & Development- II/ Labour Economics-II	SC	3	1	0	4	100
Eco/4/SC/04- A Eco/4/SC/04- B	Agriculture Economics- II/Econometrics-II	SC	3	1	0	4	100

**LIST OF ELECTIVE COURSE (SPECIALIZATION COURSES/SC)
SEMESTER-III**

Course Code	Name of Course	Credit distribution			Total Credits	Marks (scaled)
		L	T	P		
Eco/3/SC/01-A	Economics of Growth & Development- I	3	1	0	4	100
Eco/3/SC/01-B	Labour Economics-I	3	1	0	4	100
Eco/3/SC/02-A	Agriculture Economics-I	3	1	0	4	100
Eco/3/SC/02-A	Econometrics-I	3	1	0	4	100

SEMESTER-IV

Course Code	Name of Course	Credit distribution			Total Credits	Marks (scaled)
		L	T	P		
Eco/4/SC/03-A	Economics of Growth & Development- II	3	1	0	4	100
ECO/4/SC/03- B	Labour Economics-II	3	1	0	4	100
ECO/4/SC/04-A	Agriculture Economics-II	3	1	0	4	100
ECO/4/SC/04- B	Econometrics-II	3	1	0	4	100

SEMESTER – I

Foundation Courses

- | | | |
|--|---|-------------|
| 1. Basic Principles of Economic Theory | - | Eco/1/FC/01 |
| 2. Basic Data Analysis | - | Eco/1/FC/02 |

Core Courses

- | | | |
|--|---|-------------|
| 3. Industrial Economics | - | Eco/1/CC/01 |
| 4. Micro-Economic Analysis – I | - | Eco/1/CC/02 |
| 5. Macro-Economic Analysis – I | - | Eco/1/CC/03 |
| 6. Mathematical Techniques for Economic Analysis - | | Eco/1/CC/04 |
| 7. Indian Economic Policy | - | Eco/1/CC/05 |

BASIC PRINCIPLES OF ECONOMIC THEORY

Eco/1/FC/01

Course objectives: This course is intended to acquaint the students with the basic assumptions of economic analysis and the historical development of economic thoughts.

Outcome: The understanding of the students about the theoretical foundation of economic principles is developed and their capacity to appreciate its core values is enhanced.

Unit-1: Basic assumptions underlying economic analysis

Rationality, Principles of Optimization, Externality, Market Failures and government intervention, Opportunity Cost/Production Possibility Frontiers, Sustainable development

Unit-2: Historical Development of Economic Thoughts

Physiocrats, Mercantilism, Classical and Neo-Classical Economics, Keynesian, Supply side economics, institutional economics, Behavioral Economics etc.

Basic Reading Lists

- Blaug, Mark (1986), *Economic History and the History of Economics*, New York University Press.
- Hunt, E.K (1992), *History of Economic Thought*, HarperCollins.
- Mankiew Gregory N (2014), *Principles of Economics*, 7th Edition, Cengage Learning, Stamford.
- Stonier, Alfred W and Douglas C. Hague (1980), *A Textbook of Economic Theory (5th Ed)*, Pearson Education Ltd.
- Samuelson, Paul A (1947), *The Foundation of Economic Analysis*. Cambridge.

BASIC DATA ANALYSIS

Course Code: Eco/1/FC/02

Objectives: This course will guide the students with the fundamentals of analytical tools so that they can have better understanding of current trends in key economic variables.

Outcomes: Students develop the skill to interpret the current economic variable studied in the PG Course with their implications in statistical theories.

Unit-1: Types of empirical data, graphical presentation, descriptive statistics for data analysis, skewness and kurtosis, types of functional relationship: linear and non-linear, scaling techniques.

Unit-2: Basic time series analysis – components, secular trend, free hand and moving average method. Index Numbers – introduction, weighted and unweighted, Paasche, Laspeyre's and Fisher Indices.

Readings Lists

- Nagar, A.L and R.K. Das (1985), *Basic Statistics*, Oxford University Press.
- Gupta, C.B and Vijay Gupta (2004), *An Introduction to Statistical Methods*, Vikas Publishing House.
- Gupta, SP (2002), *Statistical Methods*, Sultan Chand & Sons, New Delhi

INDUSTRIAL ECONOMICS

Course Code: Eco/1/CC/01

Objectives: To impart the theoretical foundations of industrial economics and implications industrial policies.

Outcome: The learners will be able to analyze the patterns of industrialization in India and their levels of efficiency.

Unit – I: Introduction and Firm’s Behaviour

Introduction and scope of Industrial Economics; Types and choice of organizational firm – ownership and control; Passive and active behavior of firm; The Firm: Emergence and its objectives - Non -profit maximizing models. Cost theory and optimum size of a firm, Determinants of profitability and pricing decisions: Product pricing.

Unit – II: Market and Industrial Efficiency

Market structure and market conduct; Product differentiation and advertisement, Research & Development and Innovation; Market concentration, its measurement and effects on market Performance; Diversification, Integration and Merger, Theories of growth of firm: Constrained on growth. Industrial Efficiency: concept, determinants, measurement and decision making process.

Unit – III: Industrial Financing and Locational Analysis

Industrial finance and accounting: owned, external and other components of funds, financial statements – Balance sheet; Profit & Loss Account. Analysis of financial ratios and their relationships: assessment of financial soundness. Industrial location Analysis: determinants of Industrial location; Theories of Industrial location factors affecting location.

Unit – IV: Industrialization in India

Globalization and its impacts on industries; Recent trends in Industrial growth and diversification; Industrial sickness; Policy initiatives to liberalize Indian industries and its effects; Issues in disinvestment and privatization of PSUs; Importance and performance of SSIs and Cottage industries in India; Challenges facing SSIs.

Basic Reading List

- Seth, Ranjan (2010), *Industrial Economics*, Ane Books Pvt. Ltd, Chennai
- Martin, Stephen (2001), *Advanced Industrial Economics*, Wiley, 2nd Edition.
- Barthwal, R.R (1985), *Industrial Economics*, Wiley Eastern Ltd., New Delhi
- Cherunilam, F. (1994), *Industrial Economics : Indian Perspective* (3rd Eds.), Himalaya Publishing House, Mumbai
- Divine, P.J. and R.M Jones et.al. (1976), *An Introduction to Industrial Economics* George Allen and Unwin Ltd., London.
- Hay, D and D.J Morris (1979), *Industrial Economics: Theory and Evidence* Oxford University Press, New Delhi.
- Sen, A : *Industrial Economics*, OUP : Bombay
- Bains, J.S (1996), *Industrial Organization*, Cheltenham, U.K
- Kaien, M.T and N.L Schwartz (1982), *Market Structure and Innovation*, Cambridge University Press, Cambridge.
- Wiles, P.J.D. (1963), *Price, Cost and Output*, Praeger, New York

- Kirkpatrick, C.M, N. Lee and E.I. Nixon (1984), *Industrial Structure and Policy in Less Developed Countries*, ELBS/George Allen and Unwin, London.
- Smith, D.M. (1971), *Industrial Location: An Economic and Geographic Analysis*, John Wiley, New York.
- Bagchi, A. and M.Banerjee (Eds.) (1979), *Change and Choice in Indian Industry*, Bagchi Publications, Calcutta.
- Kelkar, V.L and V.V Banoji Rao (Eds) (1996), *India Development Policy Imperatives*, Tata Mc Graw Hill, New Delhi.
- Bhagwati J. and P.Desai (1972), *India: Planning for Industrialization*, Oxford University Press, London.
- Ghosh, P.K (1977), *Government and Industry*, Oxford University Press, New Delhi
- Dasgupta, P.S., Marglin and A. Sen (1972), *Guideline for Project Evaluation*, Unido Publications, New York.
- Fog, B. (1959), *Industrial Pricing Policies*, North Holland, Amsterdam.
- Isard, W (1956), *Location & Space Economy*: John Wiley: New York.

Additional Reading List

- Clarkson, K.W. and R. Millar (1985): *Industrial Organization: Theory, Evidence and Public Policy*, McGraw-Hill, Tokyo.
- Cyret, R.M. and J.G. March (1963): *Behavioral Theory of the Firm*, Engelwood Cliffs.
- Ghosh, P.K. (1977): *Government and Industry*, OUP, Delhi.
- Hennah, L. and J. Kay (1977): *Concentration of Modern Industry*, Macmillan, London.
- Israd, W. (1956): *Location and Space Economy*, John Wiley, NY.
- Koutosyiannis, A. (1979): *Modern Microeconomics*, Macmillan, NY.
- Shepherd, W.G. (1979): *Economics of Industrial Organization*, Prentice Hall.

MICRO-ECONOMIC ANALYSIS – I

Course Code: Eco/1/CC/02

Objectives: The course is intended to provide a good understanding of applying the concepts and methods of microeconomics. The broad objective of the course is to equip the students in a comprehensive manner with the various aspects of the traditional Microeconomic theory as well as the recent developments in this field.

Outcomes: The students are able to grasp the system that governs commodity exchange between the buyers and sellers and how the economic agent allocated scarce resources over different uses. They develop the skills for converting technical information into economic relationship between input and output.

Unit – 1: Demand Analysis

Elasticities (price, cross, income) of demand — theoretical aspects and empirical estimation; elasticity of supply; Theories of demand — utility; indifference curve (income and substitution effects, Slutsky theorem, compensated demand curve); Revealed preference theory; Revision of demand theory by Hicks; Indirect utility functions (duality theory); Recent developments in demand analysis (linear expenditure systems); Consumer's surplus.

Unit – II: Theory of Production and Costs

Production function — short period and long period; law of variable proportions and returns to scale; Isoquants — Least cost combination of inputs; Returns to factors; Economies of

scale; Elasticity of substitution; Euler's theorem; Technical progress and production function; Cobb-Douglas and CES production functions and their properties; Derivation of cost functions from production functions; derived demand for factors.

Unit – III: Price and Output Determination

Marginal analysis as an approach to price and output determination: perfect competition — short run and long run equilibrium of the firm and industry, price and output determination; Monopoly — short run and long run equilibrium, price discrimination; Monopolistic competition — general and Chamberlin approaches to equilibrium, equilibrium of the firm and the group with product differentiation; Oligopoly — Non-collusive (Cournot, Bertrand, Edgeworth, Chamberlin, kinked demand curve and Stackelberg's solution) and collusive (Cartels and mergers, price leadership); Price and output determination under monopoly.

Unit – IV: Alternative Theories of the Firm

Baumol's sales revenue maximization model; Williamson's model of managerial discretion; Marris model of managerial enterprise; Full cost pricing rule; Bain's limit pricing theory and its recent developments including Sylos-Labini's model; Behavioural model of firms.

Basic Reading List

- Snyder (2014), *Microeconomics Theory: Basic Principles and Extension*, Cengage Learning Publishers.
- Kreps, David M. (1990), *A Course in Micro-Economic Theory*. Princeton University Press, Princeton
- Mandal, R.K (2008), *Microeconomic Theory*, Atlantic Books, London.
- Koutsoyiannis, A. (1979), *Modern Micro-Economics* (2nd Edition), Macmillan Press, London.
- Baumol, W.J (1982), *Economic Theory and Operations Analysis*, Prentice Hall of India, New Delhi.
- Lyard, P.R.C and A.W. Walters (1978), *Micro-Economic Theory*, Mc Graw Hill, New York.
- Sen, A. (1999), *Micro-Economics: Theory and Applications*, Oxford University Press, New Delhi.
- Stigler, G. (1996), *Theory of Price*, (4th Edition), Prentice Hall of India, New Delhi.
- Henderson, James M and Richard E. Quandt: *Microeconomic Theory: A Mathematical Approach*, Tata McGraw-Hill, New Delhi, 2007.

Additional Reading List

- Hirshleifer, J and A Glazer (1977), *Price Theory and Applications*, Prentice Hall of India New Delhi
- Green, H.A.G (1971), *Consumer Theory*, Penguin, Harmondsworth.
- Hirshleifer, J and A Glazer (1997), *Price Theory and Applications*, Prentice Hall of India, New Delhi
- Da Costa, G.C. (1980), *Production, Prices and Distribution*, Tata McGraw Hill, New Delhi
- Healthfields and Wibe (1987), *An Introduction to Cost and Production Functions*, Macmillan, London

MACRO-ECONOMIC ANALYSIS – I

Course Code: Eco/1/CC/03

Objectives: To understand the theoretical framework of consumption, investment, money supply and demand for money that are required for clear understanding of the monetary and fiscal policies of the country.

Outcomes: Demonstrate a good understanding of macroeconomic principles, concepts, and theories and their implications on governmental policies. Students will learn to integrate theoretical knowledge to evaluate policy measures and analyze trade-off in the deployment of resources to alternative ends and the implications of those trade-offs for the different strata of the society

Unit -1: National Income and Consumption Function

The concept of National Income; the circular flow of product and income and accounting methods. Keynesian theory of consumption, income-consumption relations and their implications. The consumption functions – the Life-Cycle, Relative Income and Permanent Income Hypotheses.

Unit – 2: Investment Functions

Capital, investment and the rate of interest; The Present value criterion for investment, the Marginal Efficiency of Investment, the user cost and Liquidity effects, Lags in investment demand; The Acceleration principle and the theory of Investment; Investment demand and output growth.

Unit – 3: The Supply of Money

The determinants of money supply, High-powered money and Money Multiplier; The instruments of monetary policy, the mechanism of monetary expansion; The role of financial assets and intermediaries; Budget deficits and money supply; Control of Money Supply (by RBI).

Unit – 4: Demand for Money

Classical approach to demand for money – quantity theory approach, Fisher's equation, Cambridge quantity theory; Keynes' Liquidity Preference approach, transaction, precaution any speculative demand for money; Aggregate demand for money, Derivation of LM curve.

Basic Reading List

- Ackley, G. (1978): *Macro-Economics : theory and Policy*, Macmillan, New York
- Blockhouse, R and A Salansi (Eds.) (2000) : *Macro-Economics and the Real World* (Vols.) Oxford University Press, London
- Ewing, Bradley T and John M Barron (2006), *Understanding Macroeconomic Theory*, Routledge Books.
- Branson W.A (1980) : *Macro-Economic Theory and Policy*, (3rd Edition), Harper and Row, New York.
- Mankiw, George N (2008), *Macroeconomics*, Macmillan (8th Edition)
- Dornbusch, R and F Stanley (1997) , *Macro-Economics*, McGraw Hill. Inc. New York
- Hall, R.E and J.B Taylor (1986), *Macro-Economics*, W.E Norton, New York
- Heijdra, B.F and V.PO Frederick (2001) : *Foundations of Modern Macro-Economics*, Oxford University Press, New Delhi

- Jha, R, (1991) : *Contemporary Macro-Economic Theory and Policy*, Wiley Eastern Ltd., New Delhi
- Romer, D.L (1996), *Advanced Macro-Economics*, McGraw Hill Company Ltd., New York
- Scarfe, B.L (1977), *Cycles, Growth and Inflation*, McGraw Hill, New York
- Shapiro, E (1996), *Macro-Economic Analysis*, Galgotia Publications, New Delhi
- Surrey, M.J.C (Ed.) (1976), *Macro-Economic Themes*, Oxford University Press, Oxford.

Additional Reading List

- Edey, M. and A.T. Peacock (1967), *National Income and Social Accounts*, Hutchinson University Library, London.
- Duesenberry, J.S. (1949), *Income, Saving and the Theory of Consumer Behaviour*. Harvard University Press, Harvard.
- Friedman, M. (1957), *The Theory of Consumption Function*, Princeton University Press, Princeton.
- Keynes, J.M. (1936), *The General Theory of Employment, Interest and Money*, Macmillan, London.
- Gordon, R. and S.G. Harris (1998), *Macroeconomics*, Addison Wesley.
- Laidler, D.E.W. (1977), *Demand for Money: Theory and Evidence*, Dum-Don Valley, New York.
- Rakshit, M. (1998), *Studies in the Macroeconomics of Developing Countries*, Oxford University Press, New Delhi.
- Friedman, M. (1956), *Studies in the Quantity Theory of Money*, The University of Chicago Press, Chicago.
- Jha, R. (1999), *Contemporary Macroeconomic Theory and Policy*, New Age International (P) Ltd., New Delhi.

MATHEMATICAL TECHNIQUES FOR ECONOMIC ANALYSIS

Course Code: Eco/1/CC/04

Objectives: The course intended to train the students to use the techniques of mathematical analysis, which are commonly applied to understand and analyze economic problems. The emphasis of this paper is on understanding economic concepts with the help of mathematical methods rather than learning mathematics itself.

Outcomes: Develop skills to analyze the various economic variables and evaluate their theoretical properties. Students acquired ability to derive the equilibrium path of different growth models studied in the PG course.

Unit – 1: Matrices

Basic operations of matrices, determinants, matrix inversion, rank of a matrix, solution of simultaneous equations using Cramer’s Rule, matrix inversion and Gauss-Jordan methods, eigen value and vectors.

Unit – 2: Linear Programming

Introduction to Input – Output Analysis. Linear Programming – concepts and formulation of LP problem, Solution of Linear Programming through graphical and simplex methods;

duality theorem. Introduction to Game Theory- concepts, strategies and finding of game value.

Unit – 3: Differential Calculus

Rules of differentiation; Interpretation of revenue, cost, demand and supply functions; Elasticity's and their types; Multivariate functions – Rules of Partial Differentiation and Interpretations of partial derivatives. Problems of optimizations in single and multivariate functions; Unconstrained and constrained optimization in simple economic problems.

Unit – 4: Difference and Differential Equations

Simple rules of integration and its application to consumer's surplus and producer's surplus. Difference Equations – solution of the first and second order difference equations and their applications in economic models – growth models and lagged models. Differential Equations - solution of the first order and second order differential equations and simple applications.

Basic Reading List

- Allen, R.G.D. (1974), *Mathematical Analysis for Economists*, Macmillan Press and ELBS. London.
- Chiang, A.C (1986), *Fundamental Methods of Mathematical Economics*, McGraw Hill, New York.
- Gupta, S.C (1993), *Fundamentals of Applied Statistics*, S.Chand & Sons, New Delhi
- Handary, A.T. (1999), *Operations Research*, Prentice Hall of India, New Delhi.
- Hoy, Michael; Livernois John (2012), *Mathematics for Economics*, PHI-MIT.
- Speigal, M.R. (1992), *Theory and Problems of Statistics*, McGraw Hill Book Co., London
- Taha, H.A (1997), *Operations Researc : An Introduction* (6th Edition), Prentice Hall of India Pvt., New Delhi.
- Yamane, Taro (1975), *Mathematics for Economists*, Prentice Hall of India, New Delhi.

Additional Reading List

- Baumol, W.J (1984), *Economic theory and Operations Analysis*, Prentice Hall, Englewood Cliffs, New Jersey
- Monga. G.S (1972), *Mathematics and Statistics for Economists*, Vikas Publishing House, New Delhi
- Vygodsky, G.S (1971), *Mathematical Handbook* (Higer Mathematics). Mir Publishers, Moscow
- Mathur, P.N. and R.Bharadwal (Eds) (1967), *Economic analysis in input-output Research*, Input-Output Research Association of India, Pune.
- Hadley, G. (1962), *Linear Programming*, Addison Wesley Publishing Co., Mass.
- Kothari, C.R (1992) *An Introduction to Operations Research*, Vikas Publishing House, New Delhi
- Mujstafi, C.K (1992) *Operations Research: Methods and Practice*, Wiley Eastern, New Delhi.
- Veerachamy, R. (2002) *Quantitative Methods for Economists*, New Age International, Guwahati.
- Pandit, and Badal Mukherjee, *Quantitative methods of Economic Analysis*. Allied Publishers Ltd., Kolkata.

INDIAN ECONOMIC POLICY

Course Code: Eco/1/CC/05

Objectives: To enlighten the student with the basic characteristics and problems of Indian economy side by side with the various government policies and planning strategies for economic development.

Outcome: The learners can identify gaps in the various strategies of economic development and would be able to examine the scope to further development process and alleviation of poverty in the country.

Unit- 1

Basic Characteristics of the Indian Economy as a Developing Economy; Broad Demographic Features of Indian Population; Rural-urban Migration; Urbanization and Civic Amenities; Poverty and inequality; Sustainable Development; Role of state.

Unit-2

The Agricultural Sector-Land reforms in India, Technological Change in Agriculture; Terms of Trade Between Agriculture and Industry; Agricultural Marketing and Warehousing; Infrastructure in the Indian Economy; Private Investment in Infrastructure: Outlook and Prospects.

Unit - 3

Objectives and Strategy of Planning in India- Planning Experience; Failures and Achievements of Plans. Globalization and its impact on India; Fair Globalization and the need for Policy Framework; WTO and its impact on the Different Sector of the Economy.

Unit - 4

Information Technology (IT) Industry- IT in India Viewed in World Context; Major Issues in IT; Growth and Present Status of IT Industry in India; Future Prospects of IT. Industrial Policy; Public Sector Enterprises and their Performance; Problems of Sick units in India; Unemployment in India-Approaches for Employment Generation.

Basic Reading List

- Ahluwalia, I.J and I.M.D Little (Eds.) (1999). *India's Economic Reforms and development* (Essays in honour of Manmohan Singh). Oxford University Press, New Delhi
- Bardhan, P.K (9th Edition) (1999). *The Political Economy of Development in India*, Oxford University Press, New Delhi
- Bawa, R.S and P.S Raikhy (Ed) (1977). *Structural Changes in India Economy*, Guru Nanak Dev University Press, Amritsar.
- Brahmananda, P.R and V.R Panchmukhi (Eds) (2001). *Development Experience in the Indian Economy: Inter State Perspectives*. Bookwell, Delhi.
- Chakravarty, S (1987). *Development Planning: The Indian Experience*. Oxford University Press, New Delhi
- Government of India (2015), *Economic Survey, 2014-15*, Ministry of Finance.
- Puri, VK and S.K. Misra (2014), *Indian Economy*, Himalaya Publishing House, Mumbai.
- Sundaram, K.P.M and Ruddar Dutt (2013), *Indian Economy, 70th Edition*, S. Chand, New Delhi.

Additional Reading List

- Ahluwalia, I.J and I.M.D. Little (eds.) (1998): *India's Economic Reforms and Development*, OUP, ND.
- Bardhan, P.K. (1999): *Political Economy of Development in India*, OUP, ND.
- Basu, K. (2007): *The Oxford Companion to Economics in India*, OUP.
- Government of India (1993): *Report of the Expert Group on Estimation of Proportion and Number of Poor*, Planning Commission, Perspective Planning Division, ND.
- Government of India, *Economic Survey (Annual Issues)* Ministry of Finance, ND.
- Government of India (1979): *Report of the Task Force on Projections of Minimum Needs and Effective Consumption Demand*, Planning Commission, Perspective Planning Geneva.
- ILO (1999): *Key Indicators of Labour market*, ILO, Geneva.
- Parikh, K.S. (1999): *India Development Report – 1999-2000*, OUP, ND.
- Ravallion, M. (1994): *Poverty Comparisons*, Academic Press, Harwood.
- Ray, D. (1998): *Development Economics*, OUP, ND.
- Reserve Bank of India, *Report on Currency and Finance (Annual)*.
- Srinivasan, T.N. and H.B. Chenery (1987): *Handbook of Development Economics: Vol. I &II*, North-Holland Publications, Amsterdam.

SEMESTER – II

Foundation Courses

- | | | |
|--|----------|--------------------|
| 1. National Income Accounting | - | Eco/2/FC/03 |
| 2. Budgetary Theory and Practices | - | Eco/2/FC/04 |

Core Courses

- | | | |
|---|----------|--------------------|
| 3. Micro Economic Analysis – II | - | Eco/2/CC/06 |
| 4. Macro Economic Analysis – II | - | Eco/2/CC/07 |
| 5. Public Economics | - | Eco/2/CC/08 |
| 6. International Trade and Finance | - | Eco/2/CC/09 |

Open Electives

- | | | |
|---|----------|--------------------|
| 7. Statistical Techniques And Tools For Research | - | Eco/3/OE/02 |
|---|----------|--------------------|

NATIONAL INCOME ACCOUNTING Eco/2/FC/03

Objectives: Various tools and techniques for national income accounting shall be revisited while also attempting to analyze the different methodologies of national income estimations adopted from time to time by the Central Statistical Organization in India.

Outcomes: Develop skills and understanding of the students on different methodologies being adopted to estimate income at the national and state.

Unit-1: Measurement of National Income

Measurement of income- domestic factor income, compensation of employees, operating surplus, mixed income. Methods of measuring National Income- value added and income, expenditure method.

Unit-2: Estimation of National Income and State Income in India

NIC Classification, CSO Methodology on estimation of National Account Aggregates; Methodology for Compiling State Domestic Products; Price indices-2004-05 and 2011-12 series.

Reading Lists

- Gutierrez , Carlos M and Glassman, Cynthia A (2007), *An Introduction to National Income and Product Accounts*, BEA, Washington.
- Dhingra, IC; Gark, VK and Mattoo, PL (2003), *Macroeconomics: Analysis and Policy*, Sultan Chand & Sons, New Delhi.
- http://mospi.nic.in/mospi_new/upload/brochure_%202004-05.pdf
- http://mospi.nic.in/Mospi_New/upload/BaseYearRevision22jan15.pdf

BUDGETARY THEORY AND PRACTICES Eco/2/FC/04

Course objective: To enhance the understanding of the students on the basic process of budget preparation and its underlying principles.

Outcome: The learners comprehend the basic frameworks and targets of the state and central budgets; and develop skills to make critical evaluation of the annual government budgets and fiscal policy measures.

Unit – I: Conceptual Frameworks

Meaning, types and Purpose of Public Budget; Classification of Budget; Economic and Functional Classification of Budget; Welfare Principle of budget determination; Economic consequences of budget policy; Budgetary control – definition, objectives needs, methods, advantages and its limitations.

Unit – II: Planning and Budgetary Policy in India

Budgetary Policy in India since independence; Central vs. State Budgets; Planned vs. Non-Plan budgets; devolution of financial resources from Central to the State Government; Role of Planning Commission/NITI AYOG, Finance Commission and State Planning Boards.

Reading List.

- Musgrave R.A & Musgrave P.B, *Public Finance in Theory and Practice*. McGrawhill, Kogakusha, New Delhi.
- Taylor, Philip E, *Economics of Public Finance*, Oxford & IBA Publishing Co. New Delhi.
- Lekhi, R.K., *Public Finance*, Kalyani Publishers, New Delhi.
- Musgrave, R.A, *The Theory of Public Finance*, McGraw Hill, New Delhi.
- Choudhury, R.K., *Principles of Public Finance and Public Economics*, Kalapghar, Gauhati.

MICRO ECONOMIC ANALYSIS – II

Course Code: Eco/2/CC/06

Objectives: This course is intended to acquaint the student in decision making in the context of market interdependence, complexity, uncertainty and information asymmetry; give insights into developments in the areas of general equilibrium and welfare economics; and to equip the students to apply microeconomic principles in the areas of exchange and welfare.

Outcomes: Understanding of the theoretical backgrounds of distribution is enhanced. The study of the general equilibrium framework equips the student to analyse the impact of micro decisions on macro instability and develop skills in formulating business strategy in the context of market imperfections.

Unit-1: Distribution

Neo-Classical Approach – Marginal Productivity theory; Product Exhaustion Theorems (Euler and Clark-Wicksteed-Walras); Determination of rent, wages, interest and profit; Micro Theories of Distribution – Ricardo, Marxian, Kalecki, Kaldor and Pasinetti.

Unit-2: General Equilibrium

Partial and General Equilibrium; Walrasian excess-demand and input-output approaches to general equilibrium; Fixed point theorem; Existence, stability and uniqueness of equilibrium. Production without consumption-one sector model, homogenous functions, income distribution. Production without consumption – two sector model, Stolpar – Samuelson Theorem; Rybszynski Theorem.

Unit -3: Welfare Economics

Pigouvian Welfare economics; Pareto Optimal conditions; Value judgment. Social Welfare function-Samuelson and Bergson; Compensation Principle – Kaldor and Hicks criteria, Scitovosky criterion. Inability to obtain optimum welfare – imperfections, market failure, decreasing costs, uncertainty, non-existent and incomplete markets. Arrow's Impossibility Theorem, Theory of second best – Rawl's Theory of Justice, equity-efficiency trade-off

Unit-4: Economics of Information and Uncertainty

Individual behavior towards risk, expected utility and certainty equivalence approaches. Risk and Risk Aversion – Sensitivity analysis, gambling and insurance, the economics of insurance, cost and risk, risk pooling and risk spreading, mean – variance analysis and portfolio selection; Optimal consumption under uncertainty. The Economics of Search – different models.; Market with incomplete information, search and transaction costs; the economics of information.

Basic Reading List

- Kreps, David M. (1990), *A Course in Micro-Economic Theory*, Princeton University Press, Princeton
- Koutsoyiannis, A. (1979), *Modern Micro-Economics*, (2nd Edition, Macmillan Press, London
- Layard, P.R.G and A.W. Walters (1978), *Micro-Economic Theory*, McGraw Hill, New York
- Snyder (2014), *Microeconomics Theory: Basic Principles and Extension*, Cengage Learning Publishers.
- Sen, A. (1999), *Micro-Economics : theory and Applications*, Oxford University Press, New Delhi
- Stigler, G. (1996), *Theory of Price*, (4th edition), Prentice Hall of India, New Delhi
- Varian, H. (2000), *Micro-Economic Analysis*. W.W. Norton, New York
- Bronfenbrenner, M (1979), *Income Distribution Theory*, Macmillan, London
- Hirshleifer, J and A Glazer (1997), *Price Theory and Applications*, Prentice Hall of India, New Delhi
- Broadway, AR.S and N.Bruce (1984), *Welfare Economics*, Basil Blackwell, London
- Graff, J. De V (1957), *Theoretical Welfare Economics*, Cambridge University Press, Cambridge
- Da Costa, G.C (1980), *Production, Prices and Distribution*, Tata McGraw Hill New Delhi
- Green, H and V Walsh (1975), *Classical and Neo-Classical Theories of General Equilibrium*, Oxford University Press, London
- Arrow, K.J and M.D Intrilligator (Eds.) (1981), *Handbook of Mathematical Economics*, Vol. I North Holland, Amsterdam.

Additional Reading List

- Hirshleifer, J and A Glazer (1977), *Price Theory and Applications*, Prentice Hall of India , New Delhi
- Green, H.A.G (1971), *Consumer Theory*, Penguin, Harmondsworth.
- Hirshleifer, J and A Glazer (1997), *Price Theory and Applications*, Prentice Hall of India, New Delhi
- Da Costa, G.C. (1980), *Production, Prices and Distribution*, Tata McGraw Hill, New Delhi
- Healthfields and Wibe (1987), *An Introduction to Cost and Production Functions*, Macmillan, London
- Archibald, G.C (Ed) (1971), *Theory of the Firm*, Penguin, Harmondsworth.
- Bain, J (1958), *Barriers to New competition*. Harvard University Press, Harvard.

MACRO ECONOMIC ANALYSIS – II

Course Code: Eco/2/CC/07

Objectives: To study the various macroeconomic policy challenges, such as monetary, inflation, business cycle, etc, of the economy in the light of the theoretical framework of economic studies.

Outcomes: Students comprehend the background and the likely impacts of various fiscal policies taken up by the governments from time to time; and the monetary policy being followed by the apex financial institution of the country.

Unit –1: Neoclassical and Keynesian Synthesis

Neoclassical and 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 model; with Labor Market and Flexible Prices

Unit – 2: Post-Keynesian Demand for Money

Post-Keynesian Approaches to demand for money-Patinkin and the balance effect; Approaches of Baumol and Tobin; Friedman and the Modern quantity Theory; Crisis in Keynesian Economics and the Revival of Monetarism

Unit – 3: Theory of Inflation

Classical, Keynesian and Monetarist approach to inflation; Structuralist Theory of Inflation: Phillip's curve analysis – short run and long run Phillip's curve; Friedman, Samuelson and Solow – the Natural rate of unemployment hypothesis; Tobin's modified Phillip's Curve : Adaptive Expectations and Rational Expectations : Policies to control inflation

Unit –4: Business Cycle & New Classical Macro-Economics

Theories of Schumpeter, Kaldor, Samuelson and Hicks, Godwin's model; Control of business cycles – relative efficacy of monetary and fiscal policies; New classical macro-economics, critique of micro foundations, approach and policy implications

Basic Reading List

- Ackley, G. (1978): *Macro-Economics : theory and Policy*, Macmillan, New York
- Blockhouse, R and A Salansi (Eds.) (2000), *Macro-Economics and the Real World* (Vols.) Oxford University Press, London
- Branson W.A (1980), *Macro-Economic Theory and Policy*, (3rd Edition), Harper and Row, New York.
- Dornbusch, R and F Stanley (1997), *Macro-Economics*, McGraw Hill. Inc. New York
- Hall, R.E and J.B Taylor (1986), *Macro-Economics*, W.E Norton, New York
- Heijdra, B.F and V.PO Frederick (2001), *Foundations of Modern Macro-Economics*, Oxford University Press, New Delhi
- Jha, R, (1991), *Contemporary Macro-Economic Theory and Policy*, Wiley Eastern Ltd., New Delhi
- Romer, D.L (1996), *Advanced Macro-Economics*, McGraw Hill Company Ltd., New York
- Scarfe, B.L (1977), *Cycles, Growth and Inflation*, McGraw Hill, New York
- Shapiro, E (1996), *Macro-Economic Analysis*, Galgotia Publications, New Delhi
- Surrey, M.J.C (Ed.) (1976), *Macro-Economic Themes*, Oxford University Press, Oxford.

Additional Reading List

- Edey, M. and A.T. Peacock (1967), *National Income and Social Accounts*, Hutchinson University Library, London.
- Duesenberry, J.S. (1949), *Income, Saving and the Theory of Consumer Behaviour*. Harvard University Press, Harvard.
- Friedman, M. (1957), *The Theory of Consumption Function*, Princeton University Press, Princeton.
- Keynes, J.M. (1936), *The General Theory of Employment, Interest and Money*, Macmillan, London.
- Gordon, R. and S.G. Harris (1998), *Macroeconomics*, Addison Wesley.
- Laidler, D.E.W. (1977), *Demand for Money: Theory and Evidence*, Dum-Don Valley, New York.
- Rakshit, M. (1998), *Studies in the Macroeconomics of Developing Countries*, Oxford University Press, New Delhi.
- Friedman, M. (1956), *Studies in the Quantity Theory of Money*, The University of Chicago Press, Chicago.
- Jha, R. (1999), *Contemporary Macroeconomic Theory and Policy*, New Age International (P) Ltd., New Delhi.

PUBLIC ECONOMICS

Course Code: Eco/2/CC/08

Objectives: The learning objective of this paper is to impart to the students a thorough understanding of the government policies through the study of their theoretical foundations; and to introduce to the nature and theories of Public Goods and Public Choice.

Outcomes: The students will be acquainted with the issues relating to the role of Government in the changing era and the justification for Government fiscal policies.

Unit – 1: Public Economics

The role of government in the allocation of resources, distribution and stabilization: Evaluation of the policies; Private goods, Public goods and Merit goods. The economic case for a public sector to allocate resources; Market failure in the provision of public goods. Classification of economic goods according to their consumption characteristics; Public choice in a democracy: voting and resource allocation; The Wicksell approach to revealing social preferences – absolute and relative unanimity. Voluntary exchange models; impossibility of decentralized provision of public goods.

Unit – 2: Public Expenditure

Theoretical analysis of public sector growth: The Wagner hypothesis of increasing governmental activity; Wiseman – Peacock hypothesis, causes of public expenditure growth; The theories of Public expenditures – Samuelson, Tiebout and Buchanan's contribution.; Expenditure Evaluation Principles: fundamentals of Project Evaluation, Identifying and measuring benefits and costs, , Time and Discounting.

Unit – 3: Taxation and Public Debt

Principle of tax analysis: shifting and incidence; partial versus general equilibrium analysis; the ability-to-pay principle and the benefit principle. The theory of optimal taxation; Excess

burden or the welfare cost of taxation. Trade-off between equity and efficiency; Public sector debt: Intergenerational transfer of public debt. The Ricardian equivalence theorem. Principle of debt management and repayment.

Unit – 4: Fiscal Policy

Federal Finance: The rationale of fiscal federation. Inter-governmental transfer-tax sharing, loans and grants; Functions of Finance Commission, transfer of resources through Planning Commission, Gadgil formula, nature of plan transfer, centrally sponsored scheme; Fiscal deficits in India and fiscal reforms. Fiscal Responsibility and Budget Management Act 2003. Role of fiscal policy in economic development.

Basic Reading List

- Atkinson, A.B. and J.E. Siglitz (2015), *Lectures on Public Economics*, Tata McGraw Hill, updated edition.
- Auerbach, A.J. and M. Feldstern (Eds.) (1985), *Handbook of Public Economics*, Vol. I, North Holland, Amsterdam
- Buchanan, J.M. (1970), *The Public Finances*, Richard D. Irwin, Homewood
- Goode, R. (1986), *Government Finance in Developing Countries*, Tata McGraw Hill, New Delhi
- Houghton, J.M. (1970), *The Public Finance : Selected Readings*, Penguin, Harmondsworth
- Jha, R. (1998), *Modern Public Economics*, Routledge, London
- Musgrave, R.A. (1959), *The Theory of Public Finance*, McGraw Hill, Kogakusha, Tokyo
- Musgrave, R.A. and P.B. Musgrave (1976), *Public Finance in Theory and Practice*, McGraw Hill, Kogakusha, Tokyo.

Additional Reading List

- Cornes, R. and T. Sandler (1986), *The Theory of Externalities, Public Goods and Club Goods* Cambridge University Press, Cambridge
- Herber, B.P. (1967), *Modern Public Finance*, Richard D. Irwin, Homewood
- Buchanan, J.M. (1968), *The Demand and Supply of Public Goods*, Rand McNally, Chicago
- Friedman, A. (1986), *Welfare Economics and Social Choice Theory*, Martins Nijhoff, Boston
- Peacock, A. and D.J. Robertson (Eds.) (1963), *Public Expenditure : Appraisal and Control* Oliver and Boyd, Edinburgh
- Buchanan, J.M. (1958), *Public Principles of Public Debt, A Defence and Restatement*, Richard D. Irwin Homewood
- Gulati, I.S. (1979), *Centre State Financial Relations : An Assessment of the Role of Finance Commission*, M.S. University of Baroda, Baroda
- Bhargava, R.N. (1969), *Indian Public Finances*, B.D. Bhargava and Sons, Chandausi.

INTERNATIONAL TRADE AND FINANCE

Course Code: Eco/2/CC/09

Objectives: To familiarize the students the various theories of international trade, internal payment system and introduce the concept of trade integration and to understand the changing pattern of India's trade policies.

Outcomes: Students would be able to appreciate the role of technology and resources in determining the comparative advantage of trade and the role of intervention in international trade; they would also understand the role of economic intergration in shaping India's trade policies

Unit - 1: Theory of International Trade

The pure theory of international trade — Theories of absolute advantage, comparative advantage and opportunity costs, modern theory of international trade; Theorem of factor price equalization; Empirical testing of theory of absolute cost and comparative cost and Heckscher-Ohlin theory of trade. Concept and policy implications of immiserizing growth;

Unit - 2: Theory of Interventions

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; Non-tariff barriers and their implications; nominal, effective and optimum rates of tariffs — their measurement, impact and welfare implications; Metzler's Paradox.

Unit - 3: Balance of Payments

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; Policies for achieving internal and external equilibrium simultaneously under alternative exchange rate regimes;

Unit - 4: The Theory of Regional Blocs & Trade Policies in India

Forms of economic cooperation; Reforms for the emergence of trading blocks at the global level; Static and Dynamic effects of a customs union and free trade areas; Regional Trading Agreements- EU, NAFTA, SAARC, ASEAN; International financial institutions— GATT/WTO, UNCTAD and Asian Development Bank — Their achievements and failures; Trade problems and trade policies in India; Instruments of export promotion and recent import and export policies and agenda for future.

Basic Reading List

- Carbough, R.J. (latest edition): *International Economics*, International Thompson Publishing, NY.
- Grath, Anders (2013), *The Handbokk of International Trade and Finance*, Kogan Page, 3rd Edition.
- Krugman, P.R and M. Obstfeld (latest edition): *International Economics: Theory and Policy*
- Kindleberger, C.P. (1977): *International Economics*, D.B. Taraporevala Sons & Co. Pvt. Ltd., Bombay.
- Sodersten, Bo (1991): *International Economics*, Macmillan, London.

- Sodersten, Bo and Geoffrey Reed (2005): *International Economics*, The Macmillan Press, London

Additional Reading List

- Chacholiades, M. (1990): *The Pure Theory of International Trade*, McGraw Hill, Kogakusha, Japan.
- Bhagwati, J. (ed.) (1981): *International Trade: Selected Readings*, CUP, Massachusetts.
- Cherunilam, F. (2006): *International Economics*, Tata McGraw-Hill, ND.
- Heller, H.R. (1988). *International Trade: Theory and Empirical Evidence*, Prentice Hall, ND.
- Kenen, P.B. (1989): *The International Economy*, Prentice Hall, ND.
- Meade, J.E. (1952): *A Geometry of International Trade*, George Allen and Unwin Ltd., London.
- Roy, P.N. (1986): *International Trade: Theory and Practice*, Wiley Eastern, ND.
- Batra, R.N. (1975): *The Pure Theory of International Trade under Uncertainty*, Macmillan, London.
- Cherunilam, Francis (1988): *International Economics*, Tata McGraw-Hill, ND.
- Dana, M.S. (2000): *International Economics: Study, Guide and Work Book*, Routledge Publishers, London.
- Dunn, R.M. and J.H. Mutti (2000): *International Economics*, Routledge Publishers, London.
- Ellsworth, P.T. and J.C. Leith (1975): *The International Economy*, Macmillan, NY.
- Haberler, G. (1937): *The Theory of International Trade*, Macmillan, London.
- Heller, H. Robert (1968): *International Monetary Economics*, Prentice Hall, ND.
- Johnson, H.G. (1967): *International Trade and Economic Growth*, Harvard Univ. Press, Cambridge.
- Kemp, K.C. (1964): *The Pure Theory of International Trade*, Prentice Hall, New Jersey.
- Neihans, J. (1984): *International Monetary Economics*, John Hopkins Univ. Press, Baltimore.
- Salvatore, D. (1997): *International Economics*, Prentice Hall, NY.

STATISTICAL TECHNIQUES AND TOOLS FOR RESEARCH

Eco/2/OE/01

Objectives: To expose the students on the basic research tools that are commonly required in pursuing research in different areas across the various streams of higher studies.

Outcomes: The capacity of the students in using the basic research tools to undertake further research is enhanced. They can handle basic statistical software packages to analyze their research problems.

Unit-1: Data Collection & Basic Measures

Sampling – concept, methods and determination of sample size; processing, tabulation, and presentation of empirical data; measures of central tendency and dispersions; and measures of relationships between variables – correlation and regression.

Unit-2: Testing of statistical hypotheses & uses of analytical software

Parametric and non-parametric tests; concepts and procedure of hypothesis testing; test statistics - z, t and chi-square; uses of excel and SPSS for calculating statistical measures and testing of hypothesis.

Basic Reading List

- Gupta, SP (2002), *Statistical Methods*, Sultan Chand & Sons, New Delhi
- Kothari, CR (2004), *Research Methodology*, New Age International Publishers, New Delhi
- Reddy, RJ (2007), *Research Methodology*, APH Publishing Corporation, New Delhi
- Ghosh, BN (1982), *Scientific Methods and Social Research*, Sterling Publishers Pvt. Ltd, New Delhi

SEMESTER III

Core Courses

8. Economic Development and Policy In North East India	-	Eco/3/CC/10
9. Economics of Social Sector	-	Eco/3/CC/11
10. Techniques of Statistical Analysis	-	Eco/3/CC/12
11. Economics of Environment	-	Eco/3/CC/13

Elective Courses

12. Economics of Growth & Development – I	-	Eco/3/SC/01A
13. Labour Economics-I	-	Eco/3/SC/01B
14. Agriculture Economics-I	-	Eco/3/SC/02A
15. Econometrics-I	-	Eco/3/SC/02B

Open Elective

16. Women & Development	-	Eco/3/OE/02
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ECONOMIC DEVELOPMENT AND POLICY IN NORTH EAST INDIA

Course Code: Eco/3/CC/10

Objectives: This course intended to overview the basic characteristics of the North Eastern India and the pace of economic development with the various initiatives taken for it. It tries to present various challenges faced in this region on the development of agriculture, industries and infrastructures; and the problems of migration.

Outcomes: Students' understandings on the economic problems and untapped opportunities in the region are enhanced. They would be able to evaluate the various development initiatives undertaken by the Central Government to achieve inclusive growth in the region.

Unit-1: Agriculture in the North East

Economic Characteristics of North Eastern Region; Characteristics of the economy, constraints to development; Agriculture-pattern, practices (shifting cultivation) , problems and prospects, issues in agricultural productivity; Diversification of rural employment-the role of non-farm sector.

Unit-2: Migration

Migration-positive and negative impacts, Migration and regional economic development.

Unit-3: Industrial Development

Perspectives of Industry: constraints to industrialization, industrial policy- North East Industrial and Investment Promotion Policy (NEIIPP) 2007; Tourism Industry- prospects and problems, Impacts of tourism.

Unit - 4: Infrastructure Development

Economic Infrastructure: power, road, communication and banking; North East Sub-Plan-objectives, allocation and thrust areas; role and achievements of NEC/DONER; Vision Document 2020; Look East Policy-components and prospects

Basic Reading List

- Agarwal, A.K. (1987): *Economic Problems and Planning in North East India*, Sterling Publishers.
- Alam, K. (ed.) (1993): *Agricultural Development in North East India: Constraints and Prospects*, Deep and Deep, ND.
- Banerjee and Kar (1999): *Economic Planning and Development of North-Eastern States*, Kanishka, ND.
- Dutta and Karna (eds.) (1987): *Land Relations in North East India*, People's Publishing House, ND.
- Maithani, B.P. (1997): *Local Self-Government in North-East India: An Appraisal*, NIRD, Hyderabad.
- Menon, S. (ed.) (2007): *India's North East Economy-Problems and Prospects*, ICFAI Univ. Press, Hyd.
- Mishra, B. (2006): *Fiscal Policy in North-East India*, Akansha Publishing House, ND.
- Vision Document 2020, NEC, Shillong. www.necouncil.nic.in

Additional Reading List

- Gopalakrishnan, R. (1995): *The North-East India: Land, Economy and People*, Har Anand Publications, Delhi.

- <http://WWW.neidatabank@hub.nic.in>
- <http://WWW.nerdatabank@nic.in>
- *Manpower Journal*, Special Issue on North East, Vol.41, No. 2, April-June, 2006.
- Mathew, T. (ed.) (1980): *Tribal Economy of the North-East Region*, Spectrum Publications, Guwahati.
- Mishra, S.K. (2000): Rural Development in the North Eastern Region: Constraints, Prospects and PM's Package. *Eastern Panorama*, Vol.8, No. 5.
- Nayak, P. (2005): Human Development in North East India, *Journal of NEICSSR*, Vol.29, No.1, pp.1-9.
- North East Data Bank, NEDFI, Guwahati.
- North Eastern Council (2002): *Basic Statistics*, Meghalaya, Shillong.
- Panda, B. (2000): "Rural-Non Farm Employment in India's North-East- Facts, Significance and Policy Implications", *Journal of NEICSSR*, Vol. 24, No. 1.
- Sarma, Atul (.....): The North East as a Gateway to South East Asia-Big Dream and Home Truths, *Man & Development*, Vol.28, No. 2 , July.
- Srivastav, N. (2000): *Survey of Research in Economics on North-East India 1970-1990*, ICSSR, NERC, Regency Publications, Delhi.
- Srivastav, N. (2006): Industrial Development in the Northeastern States of India: The Case of Service Industries, *Journal of Industrial Economics*, Vol.3, No.4, pp.60-69.
- Thomas, E.D. (2007): Poverty and Inequality among the North-Eastern States during 1980s and 1990s in Dubey, Kharपुरi and Thomas (eds.) *Globalisation and North-East India*, Standard Publishers, ND.
- Umdor, S. (2006): "Overview of Rural Credit Markets in the Northeastern Region of India", *Journal of Rural Development*, NIRD, Hyderabad, Vol. 25, No.3, pp.425-444.
- Dialogue (2007): *A Quarterly Journal of Astha Bharati*, New Delhi, Vol.9, No.1.
- Umdor, S. and B. Panda (2007): Economic Infrastructure in North East India- An Analysis, *Man and Development*, Vol.29, No.1, pp.113-130.

ECONOMICS OF SOCIAL SECTOR

Course Code: Eco/3/CC/11

Objective: This course is meant to provide some insights into the application of economic theory in the design and implementation of public policy related to the management of social sectors. It finds its roots in welfare economics and the models for development of human capital have been taken up as its core area.

Outcome: Students have clear view on the importance and impact of public policies for the human capital formation. They would also be able to evaluate the issues of education and health care policies that are vital for poverty alleviation and formation of human capital.

Unit -1: Concept and Measurement of Human Capital

Human capital vs. physical capital; Components of human capital; Sources of human capital; measurement of human capital; Human capital and economic development & growth

Unit – 2: Economics of Education

Scope of Economics of Education; Education as an instrument for economic growth; Demand for education — private demand and social demand, Determinants of demand; Cost of Education — Expenditure on education, private costs and social costs and wastage and stagnation; Benefits of education — Direct and indirect benefits, private and social benefits.

Unit - 3: Educational Planning and Financing

Educational planning and economic growth — Cost-benefit analysis, production function models, growth accounting equations of Schultz and Denison, Manpower requirements approach, programming and input-output models; Educational financing — Resource mobilization and utilization, pricing and subsidies and effects of educational financing on income distribution. Economics of educational planning in developing countries with special emphasis on India.

Unit - 4: Health Economics

Concept and scope of health economics; Health dimensions of development; Determinants of health — poverty, malnutrition and environmental issues; Economic dimensions of health care — demand and supply of health care; Financing of health care and resource constraints; The concept of human life value; Theory and empirical studies of production of health care; Inequalities in health — class and gender perspectives; Institutional issues in health care delivery.

Basic Reading List

Economics of Education

- Becker, G.S. (1974): *Human Capital* (2e), National Bureau of Economic Research, NY.
- Psacharopoulos, G. (ed.) (1987): *Economics of Education: Research and Studies*, Pergamon Press, Oxford.
- Brewer, J. Dominic, McEwan (Ed) (2010): *Economics of Education*, Elsevier, Amsterdam
- Blaug, M. (1972): *Introduction to Economics of Education*, Penguin, London.
- Cohen, E. and T. Gaske (1989): *Economics of Education*, Pergamon Press, London
- Mc Mohan, W.W. (1999): *Education and Development: Measuring the Social Benefits*, OUP, Oxford.
- Tilak, J.B.G. (1994): *Education for Development in Asia*, Sage, ND.
- Vaizey (1962): *Economics of Education*, Faber and Faber, London.
- Woodhall, M. (1992): *Cost Benefit Analysis in Educational Planning*, UNESCO, Paris.

Health Economics

- Johanson-Lans, Shirley (2006): *A Health Economics Primer*, Pearsons, Addison-Wesley, Boston etc.
- Feldsten, Paul J., (2005) : *Economics of Health Care*, CENGAGE Learning, Indian Edition, New Delhi
- Henderson, James W (2005) *Health Economics and Policy*, CENGAGE Learning, Indian Edition, New Delhi
- Morris, Stephen, Devlin, Nancy & Parkin David (2009) : *Economic Analysis in Health Care*, Wiley India Pvt. Ltd, New Delhi

Additional Reading List (Health Economics)

- Berman, P. (ed.) (1995): *Health Sector Reform in Developing Countries: Making Health Development*
- Klarman, H.E. (1965): *The Economics of Health*, Columbia University Press, NY.
- World Bank (1993): *The World Development Report, 1993: Investing in Health*, OUP, NY.
- Baru, R.V. (1998): *Private Health Care in India: Social Characteristics and Trends*, Sage, ND
- Berman, P. and M.E. Khan (1993): *Paying for India's Health Care*, Sage, ND.

TECHNIQUES OF STATISTICAL ANALYSIS

Course Code: Eco/3/CC/12

Objectives: To improve understanding of the learners on the theoretical foundations of statistics required for analyzing the empirical relationships and estimations of economic variables; to enhance the knowledge of the students on probability and sampling distributions which are the key requirements for making statistical inferences.

Outcomes: Develop skills to evaluate the degree of relationship between the variables, and to enable the learners to make estimations and inferences.

Unit – 1: Probability

Classical and axiomatic definitions of probability; random variable; probability, mass and density functions; and mathematical expectations. Theoretical distributions– Binomial, Poisson and Normal Distributions.

Unit – 2: Correlation and Regression

Assumptions and limitations of simple correlation and regression analysis; Spearman's rank correlation. Concept of least squares and the lines of regression; standard error of estimates and coefficient of determination; the concepts of Partial and Multiple Correlation and Regression.

Unit – 3: Sampling and Estimation

Sampling- concepts and various types. Parameter and estimator; point and interval estimations; desirable properties of good estimator (unbiasedness, minimum variance, consistency, efficient and BLUE). Methods of Estimation – OLS and MLE.

Unit –4: Testing of Statistical Hypothesis

Key concepts of hypothesis testing- standard error, one-tailed and two-tailed test, level of significance, Type-I and Type-II errors; parametric & non-parametric tests. Testing of statistical hypothesis – Z-test, t-test, chi-square test and F-test.

Basic Reading List

- Croxton, Crowden and Klein (1988): *Applied General Statistics*, Pitman
- Gupta, SC and VK Kapoor (2002): *Fundamental of Mathematical Statistics*, S. Chand & Sons
- Goon, Gupta and Dasgupta (2005). *Fundamentals of Statistics Vol. I & II*, World Press.
- Gupta, S.C (1993): *Fundamentals of Applied Statistics*, S.Chand & Sons, New Delhi.

- Koutsoyiannis, A (1977). *Theory of Econometrics* (2nd Edn.). The Macmillan Press Ltd., London.
- Speigal, M.R (1992): *Theory and Problems of Statistics*, McGraw Hill Book Co. London.

Additional Reading

- Chou, Y (1975): *Statistical Analysis*. Holt, Reinhart and Winston, New York.
- Croxton, Cowden and Klein (1971): *Applied General Statistics*. Prentice Hall of India, New Delhi
- Millar, J (1996): *Statistics for Advanced Level*, Cambridge University Press, Cambridge
- Chou, Y (1975): *Statistical Analysis*. Holt, Reinhart and Winston, New York
- Goon, A.M, M.K Gupta and B.Dasgupta (1993): *Fundamentals of Statistics*, Vol. I. the World Press Ltd., Calcutta
- Hogg, R.V and A.T Craig (1970): *Introduction to Mathematical Statistics* (3rd Edition) Macmillan publishing Co., New York.

ECONOMICS OF ENVIRONMENT

Course Code: Eco/3/CC/13

Objectives: To know the theoretical foundations of environmental economics, to facilitate the optimum use of natural resources in production and consumption, to become familiar with the impacts of environment on health and promote environmental education

Outcomes: Students understand the system governing the relations between human economy and natural environment. Improve knowledge on the importance and models to achieve sustainable development.

Unit – 1: Environment and Economy

Environment and Economy Linkages; Human Intervention and Consequences: Tragedy of the Commons; Efficiency, Environmental Externalities and Market Failure ; Public Goods and Bads: Samuelson and Lindahl Equilibrium; Property Rights ; Coase Theorem; Global Commons and Externalities.

Unit – 2: The Economic Theory of Environmental Regulation and Pollution Control

The Economic Theory of Pollution Control - Direct and Indirect Instruments; Efficient Market Allocations of Pollution ; Pigouvian Taxes and Subsidies; Emission Fees and Taxes ; Marketable Pollution Permits; Risk, Uncertainty and Moral Hazard; Various Models of Pollution Control ; Trans-boundary Pollution and Environmental Protection. Monitoring and Enforcement of International Regulations.

Unit –3: Measurement of Environmental Values and Costs

Environmental Cost-Benefit Analysis; Integrated Environmental and Economic Accounting; Environmental Impact Assessment and Green Budget; Valuation Methods: (i) Hedonic Pricing Method, (ii) Travel Cost Model, (iii) Replacement Cost Model, (iv) Constructed Market Models, (v) Contingent Valuation Method, (vi) Risk Assessment Model (vii) Household Health Production function;.

Unit – 4: Natural Resource Management and Sustainable Development

Management of Exhaustible and Renewable Resources; Environment – Development Trade-Off: Uncertainty, Irreversibility; Inter-Generational Equity; Development and Environmental Kuznets Curve; Concept and Indicators of Sustainable Development; Economic Growth and Emerging Paradigms of Sustainable Development; The Problem of Poverty and Environmental Sustainability. Environment and Natural Resource Problems in India : Environmental Laws, Policy Instruments and their Implementations; Grass Root Movements and Peoples' Participation in the Management of Common and Forest Land; Social Forestry

Basic Reading List

- Bromley, Daniel W.(ed) (1998), *The handbook of Environmental Economics*; Blackwell : Oxford, U.K
- Hanley, N., I.F Shogem and B.White (1997), *Environmental Economics in Theory and Practice*; Macmillan : New Delhi
- Kolstad, C.D (1999), *Environmental Economics*; OUP : New Delhi
- Oates, Wallace E. (ed) (1994), *The Economics of Environment*; Edward Elgar : Vermont, USA
- Markandya, Anil and Julie Richardson (ed) (2005), *Environmental Economic*; earthscan: London.
- Hussain, Ahmed M., (2004) *Principles of Environmental Economics*; Routledge : London
- Sengupta, Ramaprasad (2001), *Ecology and Economics* : OUP : New Delhi
- Bates, Wallage E (1994), *The Economics of Environment*, Edward Elgar, Vermont USA.
- Bhattacharya, R.N (2001), *Environmental Economics: An Indian Perspective*, OUP, New Delhi.

Additional Reading List

- Baumol, W.J and WE Oates (1988), *The Theory of Environmental Policy*, OUP, Cambridge.
- Fisher, A.C (1981), *Resource and Environmental Economics*, OUP, Cambridge.
- Pearce, D.W. and R. Turner (1991), *Economics of Natural Resource Use and Environment*, John Hopkins University Press, Baltimore.
- Sankar, U (2001), *Environmental Economics*, OUP, New Delhi.
- Tietenberg, T (1994), *Environmental Economics and Policy*, Harper Collins, New York.
- Perman, R and J. McGilvary (1996), *Natural Resource and Environmental Economics*, Longman, Longdon.
- Lietenberg T (2003), *Environmental and Natural Resource Economics*, Pearson, New Delhi.

ECONOMICS OF GROWTH & DEVELOPMENT – I
Course Code: Eco/3/SC/01A

Objectives: The course attempts to impart the various theories and models of economic development from classical to recent theoretical developments. To impart clear understanding of the theories of economic growth and development which is necessary to have better perspectives on the economic problems of developing countries.

Outcomes: Students understand the various development models implemented across the countries and have the capacity to evaluate the existing development models of the countries.

Unit – 1: Economic Development – Backwardness in Historical Perspective. Economic Growth and Development; Facts of Economic Growth : Capital, Labour and technology, Traditional growth models of Harrod and Domar, Instability of equilibrium; Neo-classical growth models of Solow and Meads; Joan Robinson and Cambridge criticism of Neo-classical analysis of growth.

Unit – 2: Poverty – absolute and relative; development gaps; quality of life and Holistic view of development & Civil societies; Economic development and institutions – Markets and Market failure, State and State failure, issues of good governance; Classical theories of development; Development of capitalistic Economy, theory of social Change; Surplus value and profit; Crisis in Capitalism – Schumpeter and Capitalistic development.

Unit – 3: Theories of growth and development – vicious circle of poverty, circular causation, unlimited supply of labour, big push, balanced and unbalanced growth, critical minimum effort thesis, low-income equilibrium trap; Dualism – technical, behavioural and social; Models of Lewis, Rani and Fei, Mahalanobis; Dependency theory of development; Structural view of development.

Unit – 4: Role of agriculture in economic development; Efficiency and Productivity in agriculture, New technology and sustainable agriculture; globalization and agricultural growth; Pattern of industrialization in developing countries; the choice of techniques and appropriate technology and employment; Rural Industrialization; Efficiency of small-scale vs. large-scale production; Infrastructure and its importance in developing countries

Basic Reading List

- Adelman, I. (1961), *Theories of Economic growth and Development*. Stanford University Press, Stanford.
- Behrman, S. & T.N. Srinivasan (1995), *Handbook of Development Economics, Vol. 3*, Elsevier, Amsterdam.
- Brown, M. (1966), *On the theory and Measurement of technical Change*, Cambridge University Press, Cambridge, Mass.
- Chenery, H.B et. Al. (Eds.) (1974), *Redistribution with Growth*. Oxford university Press, Oxford
- Chenery, H. & T.N.Srinivasan (Eds) (1989), *Handbook of Development economics*, Vols. 1 & 2, Elsevier, Amsterdam.
- Dasgupta, P. (1993), *An Introduction to development Economics*, Allen and Unwin, London.

- Gillis, M.K, D.H. Perkins, M.Romer & D.R Snodgrass (1992), *Economics of Development* (3rd Edition), W.W. Norton, New York.
- Gimmell, N. (1987), *Surveys in Development Economics*, Blackwell, Oxford.
- Higgins, B. (1959), *Economic Development*, W.W. Norton, New York.
- Hogendorn, J. (1996), *Economic Development*, Addison, Wesley, New York.
- Kahkonon, S. & M.Olson (2000), *An New Institutional Approach to Economic Development*, Vistaar.
- Kindleberger, C.P. (1977), *Economic development* (3rd Edition), McGraw Hill, New York.
- Meier, G.M (1995), *Leading Issues in Economic Development* (6th Edition), Oxford University Press.
- Myint, Hla (1965), *The Economics of Underdeveloped Countries*, Preager, New York.

LABOUR ECONOMICS-I

Course Code: Eco/3/SC/01B

Objectives and outcomes: This paper exposes the students to the theoretical issues of labour markets that are required for the determination of efficiency in the management of labour demand and supply.

Unit – 1: Micro Economics of Labour

Demand for Labour – Production & Profit functions; Derivation of Labour Demand Function; Elasticity of Substitution; Rules of Derived Demand; Substitutes and Complements; Cross Elasticity of factor Prices; Adjustment Costs & Labour Demand, Demand for Labour in relation to Size and Pattern of Investment. Supply of Labour – Measuring the Labour Force; the Workers’ Preferences; Labour Supply Elasticity; Labour Market Equilibrium – Competitive & Non-Competitive Equilibrium.

Unit – 2: Wages & Employment

Theory of Wages – Classical, Neo-Classical and Bargaining theories; Institutional Economics and Wage Determination; dual Theory; segmentation of wages; wage and compensating wage Differentials; Hedonic Wage function. Employment & Development Relationship – Poverty & Unemployment; Wage Rate & Unemployment; Unemployment - Concepts, types and Measurement; The Economics of Collective Bargaining - Costs of Strike; Determinants of Bargaining Power; Models of the Bargaining Process : Union – Wage Effects, Exit Voice Hypothesis; Unions and Resource Allocation.

Unit – 3: Efficiency & Migration

Alternative Pay Schemes and Labour Efficiency – Economics of Optimal Fringe Benefits; Pay for Performance; efficiency wage Payments; Deferred Payment Schemes; asymmetric Information and Efficiency; Types of Labour Mobility; Migration as Investment in Human Capital; The Determinants of Migration; the Consequences of Migration-capital & Product Flow, Immigration Policy and Issues; Mobility & Productivity of Labour. Impact of Immigration on the wage of the Natives.

Unit – 4: Market Discrimination & Future Issues

Race, Group, Caste, Class & Gender Discrimination in the Labour Market; Employer’s Employee, Consumer Discrimination; Measurement of Discrimination. The discrimination

co-efficient; Labour Issues in the decade ahead – Economic Problem, Human Problem; Liberalisation and Globalisation : Impact on Labour Market, Role of Trade Union; Job Outsourcing and the WTO Regime; Work & Leisure; Distribution of Income; Participation & Identity.

Basic Reading List

- Datt, G. (1996), *Bargaining, Power, Wages and Employment: An Analysis of Agricultural Labour Markets in India*, Sage Publications, New Delhi.
- Jhabvala, R and R.K Subrahmanya (Eds.) (2000), *The Unorganised Sector; work Security and Social Protection*, sage Publications, New Delhi
- Lester, R.A (1964), *Economics of Labour*, (2nd Edition) Mcmillan, New York
- Mc Connel, C.R and S.L Brue (1986), *Contemporary Labour Economics*, Mc Graw Hill, New York
- Papola, T.S, P.P Ghosh and AN Sharma (Eds) (1993), *Labour employment and Industrial relations in India*, B.R Publishing Corporation, New Delhi
- Venkata Ratnam, C.S (2001), *Globalization and Labour-Management Relations : Dynamics of Change*, Sage Publications/Response Books, New Delhi
- Mc Cormick, B and Smith (Eds.) (1968), *the Labour Market*, Penguin, Harmondsworth.
- Papola, T.S and Rodgers, G (Eds.) (1992). *Labour Institutions and Economic Development in India*, International Institute for Labour Studies, Geneva
- Rees, a (1973), *Economics of Work and Pay*, Harper and Raw, New York

AGRICULTURE ECONOMICS-I

Course Code: Eco/3/SC/02A

Objectives: It is attempted to impart thoroughly the conceptual backgrounds on the study of agricultural economics. This will help the students' understandings while exposing themselves to the real world situation of agricultural developments and problems.

Outcomes: Development skills on the part of the students to evaluate various institutional conditions prevailing in the state of agriculture in India and they will be expected to be able to suggest measures for existing problems.

Unit-1: Agriculture & Economic Development

Nature & Scope of Agricultural and Rural Economics; Traditional Agriculture and its Modernisation – Schultz's Thesis; role of Agriculture in Economics Development; Mechanization of agriculture; Interdependence between Agriculture and Industry – some Empirical Evidence; Models of Issues and Problems in the Development of Rural Agro – based Industries.

Unit-2: Rural Infrastructure, Land Reforms & Land Policy

Rural Infrastructure – Use of Land, Water and Energy; Role, Mode and Problems of Rural Transport, Principles of Land Utilization; Land Distribution – Structure and Trends Land Values and Rent. Land tenures and Farming Systems – Peasant, Capitalist, Collective and State Farming; Tenancy and Crop sharing – Forms, Incidence and Effects; Land reform

measures and performance; Women and land reforms; Problems of marginal land small farmers

Unit-3: Agricultural Production & Productivity

Agricultural production – Resource Use and Efficiency; Production function Analysis in Agriculture; Size of Farm and Laws of Returns – Theoretical and Empirical Findings; farm Budgeting and Cost Concepts; economics of Farm Size, Productivity and Efficiency; returns to Scale; Types of Farming; Technical Change, Labour Absorption and Gender Issues in Agricultural services. The theory of Risk and uncertainty in Agriculture – types of uncertainties, adjustment against risk and uncertainty

Unit-4: Rural Labour Market

Rural Labour Supply; Interlocking of Factor Markets; Mobility of Labour and segmentation in labour markets; Marginalisation of Rural Labour; Nature, Extent and Trends in Rural unemployment; Agricultural Wages in India; Male – Female Wage Differential; Non-agricultural Rural Employment – Trends and Determinants.

Basic Reading List

- Alternative Economic Survey, Rainbow/Zed Publishers, New Delhi
- Bhardan (1984), *Land, Labour and Rural Poverty*, OUP, ND
- Bhaduri, A. (1984), *The Economic Structure of Backward Agriculture*, Mc Millan, Delhi
- Bilgrami, S.A.R (1996), *Agricultural Economics*, Himalaya Publishing House, Delhi
- Dantwala, M.L et.al (1991), *Indian Agricultural Development Since Independence*, Oxford & IBH, New Delhi.
- Government of India, *Economic Survey (Annual)*, New Delhi
- Gulati, A and T Kelly (1999), *Trade Liberalisation and Indian Agriculture*, Oxford University Press, New Delhi
- Kohlon, A.S and Tyagi D.S (1983) *Agriculture Price Policy in India*, Allied Publishers, New Delhi
- Rao, C.H Hanumantha (1975), *Agricultural Growth, Rural Poverty and Environmental Degradation in India*, Oxford University Press, New Delhi
- Rudra, A. (1982), *Indian Agricultural Economics : Myths and Reality*, Allied Publishers, New Delhi
- Sasini, GR. (1979), *Farm Size Resource Use Efficiency and Income Distribution*, Allied Publishers, New Delhi
- Chaudhary, P. (1972), *Readings in Indian Agricultural Development*, George Allen & Unwin, London.
- Ghatak, S and K Ingerscent (1984) *Agriculture and Economic Development*, Select books, New Delhi
- Raj K.N et.al (1988), *Essays in the Commercialization of Indian Agriculture*, Oxford University Press, New Delhi
- Popola, T.S (1982), *rural Industrialisation in India*, Himalaya Publishing House Bombay

ECONOMETRICS-I
Course Code: Eco/3/SC/02B

Objectives: To build the capacity of evaluating the theoretical efficiency of various empirical tools being adopted in economic research. This will help students in choosing the most appropriate tools for the analysis and statistical inference as well as modeling of economic variables.

Outcomes: The capacity to identify inherent problems in estimations and modeling economic variables is enhanced. Students are exposed to the techniques of modeling lagged and of qualitative variables.

Unit-1: Basic Econometrics Tools

Nature, meaning and scope of econometrics; Simple and general linear regression model - Assumptions, Estimation (through OLS approach) and properties of estimators; Gauss-Markov theorem; Concepts and derivation of R^2 and adjusted R^2 ; Concept and analysis of variance approach and its application in regression analysis; Estimation of non-linear equations.

Unit -2: Violation of Classical Assumptions in Regression Analysis

Nature, test, consequences and remedial steps of problems of Multicollinearity; Heteroscedasticity and Auto-correlation; Problems of specification error; Errors of measurement.

Unit-3: Dummy Variables & Distributed Lag Models

Dummy Variables in regression; Various models - Linear Probability Model (LPM), Logit, and Tobit models, and their applications. Autoregressive and distributed lag models - Koyak model, Partial adjustment model, adaptive expectations; Almon approach Scheme; Causality test.

Unit-4: Some Applications of Single Equation Models

Application of single equation techniques to households and firms – Engel's curves analysis; measurements of inequality (Gini coefficient); Estimation of production functions: Cobb-Douglas and CES; Estimation of cost curves and cost functions.

Basic Reading List

- Gujarati, Damodary, N and Sangeetha (2007), *Basic Econometrics*, (4th Ed), Tata McGraw-Hill, New Delhi.
- Chow, G.C. (1983). *Econometrics*, McGraw Hill, New York.
- Goldberger, A.S (1998). *Introductory Econometrics*, Harvard University Press, Cambridge.
- Griffiths, William E and R. Carter Hill (2011), *Using Eviews for Principles of Econometrics*, John Wiley & Sons; 4th Edition.
- Gujarati, D.N (1995). *Basic Econometrics* (2nd Edn.). McGraw Hill, New Delhi.
- Johnston, J (1960). *Econometric Methods* (2nd. Edn.). McGraw Hill, Tokyo.
- Kmenta, J (1997). *Elements of Econometrics* (Reprint Edn.), University of Michigan Press, New York.
- Koutsoyiannis, A (1977). *Theory of Econometrics* (2nd Edn.). The Macmillan Press Ltd., London.

Additional Reading List.

- Madalla, G.S. (1997). *Econometrics*. McGraw Hill, New York.
- Theil, H. (1981). *Introduction to Econometrics*, Prentice Hall of India. New Delhi.
- Intriligator, M.D (1980). *Econometric Models, Techniques, and Applications*, Prentice-Hall of India, New Delhi.
- Johnston, J. and Jack Dinardo (1997). *Econometric Methods*, McGraw Hill.
- Croxton, F.E., D.J. Cowden and S. Klein (1973). *Applied General Statistics*. Prentice Hall of India. New Delhi.
- Green, W. (2000). *Econometrics*, Prentice Hall of India, New Delhi.

WOMEN & DEVELOPMENT

Course Code: Eco/3/OE/02

Objectives: To sensitize the gender dimensions of economic development across the disciplines of studies.

Outcomes: Enhanced understanding of the dynamics of women status in the changing societies across the countries and the roles played by various institutions for its improvement.

Unit–1: Importance and Concepts of Women Studies; Women in patriarchal and matriarchal societies and their relevance to present day society in India. Economic topics where gender matters; Factor affecting decision making by women; property rights, access to and control over economic resources, assets; Economic status of women and its effect on work-participation rates, income level, health and education in developing countries like India.

Unit- 2: Demography of female population: Age, structure, mortality and sex ratio – causes of declining sex ratios and fertility rates in India; Women and their access to nutrition, health, education and social and community resources and their impact on female mortality and fertility. Gender Development Index; Gender Empowerment Measures; Impact of technological development and modernization on women’s work participation in various sectors; Role of voluntary organizations, self-help groups and women.

Basic Reading List

- Boserup, E (1970), *Women’s Role in Economic Development*, George Allen and Unwin, London.
- Desai, N. and M.K Raj, (Eds) (1979), *Women and Society in India*, Research Centre for Women Studies, SNDT University, Bombay.
- Government of India (1974), *Towards Equality – Report of the Committee on the Status of Women in India*, Department of Social Welfare, Ministry of Education and Social welfare, New Delhi.
- Krishnaraj, M., R.M. Sudarshan and A. Shariff (1999), *Gender, Population and Development*, Oxford University Press, New Delhi
- Seth, M (2000), *Women and Development : The Indian Experience*, Sasse Publications, New Delhi
- Srinivasan K and A Shroff (1988), *India : Towards Population and Development Goals*, Oxford University Press, New Delhi

- Venkateswaran, S (1995), *Environment, Development and the Gender Gap*, Sage Publication, New Delhi
- Wazir, R. (2000), *The Gender Gap in BasPic Education : NGO as Change Agents*. Sage Publications, New Delhi.

SEMESTER IV

Core Courses

- | | | |
|--|----------|--------------------|
| 1. Demography | - | Eco/4/CC/10 |
| 2. Financial Institutions and Markets | - | Eco/4/CC/11 |

Elective Courses

- | | | |
|--|----------|---------------------|
| 3. Economics of Growth and Development-II | - | Eco/4/SC/03A |
| 4. Labour Economics-II | - | Eco/4/SC-03B |
| 5. Agriculture Economics-II | - | Eco/4/SC/04A |
| 6. Econometrics – II | - | Eco/4/SC-04B |

DEMOGRAPHY

Course Code: Eco/4/CC/10

Objectives: To expose the students on theoretical foundation of population studies and the dynamics of population structures and growth.

Outcomes: Students' knowledge on the theories of population and measurement tools of various population structures and determinants shall be improved. They will be able to undertake population studies on their own.

Unit-1: Conceptual Framework

Meaning, scope and subject matter of demography. Sources of demographic data - census, vital registration, sample surveys. Theories of population growth - Malthusian, Optimum Theory; theory of demographic transition, Medows on population; Population projections.

Unit-2: Population Structure and Measurements

Population composition and distribution- sex, age density, rural-urban divide; Age pyramid; Fertility – different measures and factors affecting fertility; Nuptiality – concepts and measures; Mortality- various measures; Patterns and Trends fertility and mortality – national and international.

Unit-3: Migration and Urbanization

Meaning and types of migration; methods of measuring internal migration; factors affecting migration; Theories and models of migration – Duncan's theory, Lewis Model, Fei-Ranis Model and Harris-Todaro Model; Urbanization – concept, measurement and factors affecting urbanization

Unit-4: Population Policy and Family Planning in India

Government policies to control population growth; National Population Policy 2000; Concept and need for family planning in India; Family Planning strategies, achievements and Weaknesses.

Basic Reading List

- Bogue, D.J (1971): *Principles of Demography*, John Wiley, NY
- Chenery, H and N. Srinivasan (1989): *Handbook of Development Economics*, Vol. I & II, Elsevier, Amsterdam.
- Coleman, D.A (2006), "Immigration and Ethnic Change in Low-fertility Countries: A Third Demographic Transition". *Population and Development Review*, 32(2).
- Bhende, A.A (1982) and T. Kanitkare, *Principles of Poupulation Studies*, Himalaya.
- Majumdar, P.K (2010), *Fundamentals of Demography*, Rawat Publications, New Delhi
- Misra, BD (1980): *An Introduction to the Study of Population*, South Asian Publishers.

Additional Reading List

- S. N. Agarwal (1985): *India's Population Problem*, Tat McGraw Hill, 1985.
- Government of India, *Census of Indian and Related Monographs and Reports*.
- U.N (1979): *Methods of Measuring Internal Migration*, 1979.

- Srinivasan, K and K.B. Pathak (1992), *Dynamics of Population and Family Welfare*, Himalaya.
- Kurup, R.S. et al. (1974): *Fact Book on Population and Family Planning*, Bureau of Economics and Statistics.

FINANCIAL INSTITUTIONS AND MARKETS

Course Code: Eco/4/CC/11

Objectives: This course intends to enhance the understanding of the students on the framework and working of financial markets. It attempts to outline the historical and recent development in financial markets and the changes in its regulatory mechanism.

Outcomes: The theoretical and conceptual knowledge of students on financial market is enhanced and they can evaluate the dynamics of financial markets and their roles in economic development of the country.

Unit-1: The Structure of Financial System; Nature and Role of Financial System; Equilibrium in Financial markets; Indicators of Financial Development; Financial Intermediaries; Indian Financial System at Present-Secondary Markets, Maturity Pattern of Financial Claims, Role Transformation, Financial Integration, Repos Market; Financial Sector Reform- Chakravarty and Narasimhan Committee Reports.

Unit-2: Risk and Financial Assets: Types of risk, types of return, risk- return trade off. Theories of Interest rate determination; Term Structure of interest rates; determinants of the general structure of interest rates; reasons and effects of Regulation of interest. Call money market; Treasury bill market; Commercial bill market; Government securities market;

Unit-3: Nature, Organization and Participants of Foreign Exchange Market; General Features of the FEM development; Currency convertibility; Definition and types of Non Bank Statutory Financial Organisations (NBSFOs); Sources of funds and recent developments. Public deposit with non-banking companies.types, maturity and purpose.

Unit-4: Rise and fall of the Brettonwoods system; Working of floating exchange rates since 1973; Offshore Banking Centers; International liquidity; Foreign capital flows-uses and determinants, international financial instruments; Indian and World Bank; History, nature and recent development of Eurocurrency market.

Basic Reading List

- Bhole , L.M (2009), *Financial Institutions and Markets: Structure, Growth and Innovations*, Tata Mc Graw Hill Company Ltd., New Delhi
- Bhole, L.M (2000), *Indian Financial System*, Chugh Publications, Allahabad
- Edminster, R.O (1986), *Financial Institutions, Markets and Management*, Mc Graw Hill New York.
- Franco Modigliani et.al (2005), *Foundatiion of Financial Markets and Institutions*, Pearson Education, Indian Branch, New Delhi
- Goldsmith, R.W (1960), *Financial Structure and Development*, Yale, London
- Hanson J.A and S Kathuria (Eds.) (1990), *India : A Finanical Sector for the Twenty-first Century*, Oxford University Press, New Delhi

- Harker, P.T and S.A Zenios (2000) (Ed.), Performance of Financial Institutions Cambridge University Press, Cambridge
- Johnson, H.J (1993), Financial Institutions and Markets. Mc Graw Hill, New York
- Khan, M.Y (1996), Indian Financial Systems, Tata Mc Graw Hill, New Delhi
- Machiraju, H.R (1999), Indian Financial Systems, Vikas Publishing House, New Delhi
- Machiraju, H.R (?), International Financial Markets and India, New Age Publication.
- Ohlson, J.A (1987), The Theory of financial Markets and Institution, North Holland, Amsterdam
- Maurice D.Levi(2009), International Finance,Routledge, New York
- Michael Melvin (?), International Money and Finance, Pearson Education
- Prasad, K.N (2001), Development of India's Financial system, Sarup & Sons, New Delhi
- Robinson, R.I and D Wrightman (1981), Financial Markets, Mc Graw Hill, London
- Smith, P.F. (1978), Money and Financial Intermediation : The Theory and Structure of Financial System, Prentice Hall, Englewood-Cliffs, New Jersey.

ECONOMICS OF GROWTH AND DEVELOPMENT-II

Course Code: Eco/4/SC/03A

Objectives: To enhance deeper theoretical exposure on the models of economic growth with an emphasis on the role played by various multi-lateral and bi-lateral institutions and FDI on economic development of the country.

Outcomes: Knowledge of the students on the recent development in growth models and the roles played by international organizations and financial institutions on the development of the country is enhanced.

Unit-1: Technological Progress : Embodied and disembodied; Production function approach to the economic growth; total factor productivity and growth accounting : Models of Kaldor and L.Pasinetti; Ramsay's rule, Golden rule of accumulation; Two sector model of U; and Stability of Equilibrium; Contributions of Tobin and Patinkin. Endogenous Growth – A.K Model

Unit-2: Static and Dynamic gains from trade; Prebisch-Singer and Myrdal thesis; Import-Substituting Industrialization, Export-led growth, Dual gap analysis; Tariffs and Effective protection, Post-GATT International Economic order, Latin American and East Asian Experience.

Unit-3: Role of Monetary and fiscal Policies in developing countries- Prior savings, inflation and growth – Empirical evidence; External resources – FDI, aid vs. trade, technology inflow, MNC activity in developing countries. Borrowings – domestic and external; Burden of borrowing; IMF and World Bank – Policies, achievements and failures.

Unit-4: Need for investment criteria in developing countries – present vs. future; Alternative investment criteria, cost-benefit analysis, shadow prices, project evaluation and UNIDO Guidelines; Need for planning – democratic, decentralized and indicative planning, micro-level planning, review of Indian Plan models and planning, problems of plan implementation.

Basic Reading List

- Adelman, I. (1961), Theories of Economic growth and Development, Stanford University Press, Stanford.
- Behrman, S. and T.N. Srinivasan (1995), Handbook of Development Economics, Vol. 3. Elsevier, Amsterdam
- Brown, M. (1966), On the Theory and Measurement of Technical Change, Cambridge University Press, Cambridge, Mass
- Chenery, B.B. et. Al. (Eds.) (1974), Redistribution with Growth, Oxford University Press, Oxford.
- Chenery, H. and T.N Srinivasan (Eds.) (1989), Handbook of Development Economics, Vols. 1 & 2, Elsevier, Amsterdam.
- Dasgupta, P. (1993), An Enquiry into well-being and Destitution, Clarendon Press, Oxford.
- Ghatak, S. (1986), An Introduction to Development Economics, Allen and Unwin, London.
- Gillis, M., D.H. Perkins, M. Romer and D.R. Snodgrass (1992), Economics of Development (3rd Eds.) W.W.Norton, New York.
- Gimmell, N. (1987), Surveys in Development Economics, Blackwell, Oxford.
- Higgins, B. (1959), Economic Development, W.W Norton, New York.
- Hogendorn, J (1996), Economic Development, Addison, Wesley New York.
- Kahkonon, S. and M. Olson (2000), A New Institutional approach to Economic Development, Vistaar
- Kindleberger, C.PO (1977), Economic Development, (3rd Eds.) Mc Graw Hill New York
- Meier, G.M (1995), Leading Issues in Economic Development, (6th eds.) Oxford University Press, New Delhi
- Myint, Hla (1965), the Economics of Underdeveloped Countries, Preager, New York
- Myint, H. (1971), Economic Theory and Underdeveloped Countries, Oxford University Press, New York.

LABOUR ECONOMICS-II **Course Code: Eco/4/SC-03B**

Objectives: Exposure of the students to labour industrial relations and the existing statutory provisions for labour regulations. It also presents the nature and problems of labour market in India.

Outcome: Enhanced the understanding of the students on the structure of existing labour markets and the role of existing legal provision for the protection of welfare of the labour.

Unit-1: Labour and State

State & Social Security of Labour – Concept & Evolution; Social Assistance & Social Insurance; Labour Welfare – Definition, Techniques, Aims, Needs & Benefit; Failure of Labour Welfare – Causes & Consequences; Child Labour – Economics & Extent of the Child Labour in Organised & Unorganised; Legislative Protection for Child Labour; Child Labour & ILO; Female Labour – Economics & Extent; Increasing Participation of female Labour in industries; Legislative Measures for Welfare of Female Labour

Unit-2: Wages, Standard of Living & Productivity

Principles of Wage fixation; Minimum wage, living Wage & Fair Wage – theory & Practice; National Wage Policy, Wages & Wage Boards; Labour Productivity – significance, Meaning, Measurement, Factors affecting Labour Productivity; Measurement of Output & Labour Input; Bonus System & Profit Sharing; Productivity Movement in India.

Unit-3: Industrial Relations & Rationalisation

Importance, Features, Growth, Pattern, Structure, Objectives & Achievements of labour Unions in India; Causes of Slow Growth of Labour Union in India – Suggested Remedial Measures; Industrial Dispute – Causes, Settlement & Prevention Mechanism; Labour Legislation in India; India Labour Laws & Practices in relation to International Labour Laws; Rationalization - Definition, Benefits; Impact of Rationalisation on Employment; Need for Rationalisation in India; Social Aspects of Rationalisation.

Unit-4: Labour Market in India

Nature and Characteristics of Labour Markets in Developing Countries like India; Paradigms of Labour Market Analysis – Classical, Neo-Classical and Dualistic Economy; Industrial Labour – Problems in different Sectors; Labour Market Reforms – Exit Policy, Need for Safety Nets; Second National Commission on Labour; Agricultural Labour – Wages & Earnings; Minimum wages in agriculture; standard & Levels of Living; Indebtedness.

Basic Reading List

- George J. Borjas (1996), Labour Economics, Mc Graw Hills, New York
- Campbell R. Mc Connell and Stanley L. Brue (1995), Contemporary Labour Economics; Mc Graw Hills, New York
- F. Ray Marshall (1984), Labour Economics, Richard D. Irwin, Illinois
- Arthur D. Butler (1972), Labour Economics and Institutions; American Publishing Co., New Delhi
- Richard A. Lester (1986), Economics of Labour : Working in India's Informal Economy, Cambridge University Press, Cambridge.
- Punekar, S.D (1978), Labour Welfare, Trade Unionism and Industrial Relations, Himalaya Publishing House, Bombay.
- Sach, J (1990), Social Conflict and Populist Policies in Latin America in R. Brunetta and C.D Aringa (eds.) Labour Relations and Economic Performance, Mc Millan, Basing Stoke.
- Singh VB. (Ed) (1970), Industrial Labour in India, Popular Prakashan, Bombay
- Hauseman, S. (1991), Industrial Restructuring with Job Security, Harvard University Press, Cambridge, Mass
- MHRD, GoI (1987), Shram Shakti : report of the National Commission on Self-employed Women and Women Workers in the Informal Sector, Ministry of Human Resources Development, New Delhi
- Misra, L. (2000), Child Labour in India, Oxford University Press, New Delhi.
- Standing G. and V. Tokman (Eds.) (1991), Towards Social Adjustment, ILO, Geneva.
- Holmstrom, Mark (1985) Industry and Inequality : The Social Anthropology of Indian Labour Cambridge, Cambridge University Press.
- ILO, (1976) Employment, Growth and Basic Needs, Geneva, ILO

- Jolly, Richard and others (1973), (Eds.) Third World Employment
- Kabra Kamal Nayan, (1995), the Informal Sector : A Reappraisal, Journal of Contemporary Asia, 25,2, April – June
- Latouche, Serge, (1993), In the Wake of the Affluent Society: An Exploration of Post Development, London, Zed Books.

AGRICULTURE ECONOMICS-II

Course Code: Eco/4/SC/04A

Objectives: Increased exposures on the role of various institutions on agricultural development, the growth of agriculture and structure of agricultural pricing, the role of government and the nexus of agriculture development and foreign trade.

Outcomes: Understandings on the roles of credit institutions like NABARD, Cooperative Societies, etc, state intervention on agriculture development and impact of foreign trade are enhanced. Students can evaluate the structural problems of Indian agriculture and can suggest measures for the existing problems that set back Indian Agriculture.

Unit-1: Rural Finance & Role of Cooperatives

Role of Capital; Rural Savings and Capital Formation; Role of Rural Credit – Characteristics and Sources of Rural Credit – Institutional and Non-Institutional Credit; Reorganization of Rural credit – cooperatives; commercial banks, Regional Rural Banks; Role of NABARD; Co-operative Movement; Agricultural C-operation in India : Problems and Prospects of Co-operative Institution.

Unit-2: Agricultural Prices

Marketing and State Policy; Agricultural Markets and Marketing Efficiency – Marketing functions and Costs; Market structure and Imperfections; regulated Markets; Marketed and Marketable Surplus; Futures Market & Forward Markets; Behaviour of Agricultural Prices; State Policy with respect to Agricultural Marketing; Warehousing; Prices; Taxation and Crop insurance; Need for State Intervention; Objectives of Agricultural Prices Policy – Instruments and Evaluation; Food Security in India and Public Distribution system; reports of Khusro Committee & Kobra Committee.

Unit-3: Agricultural Growth in India

Shifts in Cropping Pattern. Prospects & Problems of Agricultural Growth in Mizoram; Supply of Inputs – Irrigation, Power, Seed and fertilizers; Pricing of Inputs and Role of Subsidies; New Strategy of Agricultural Development and Technological Progress; Sustainable Agriculture – Indigenous Practices; Bio-technological Practices and Growth Potential.

Unit-4: Agricultural and External Sector

International Trade in agricultural Commodities; Commodity Agreements – Role of WTO; Issues in Liberalization of Domestic and International Trade in Agriculture – Nature and Features of Agri-business; Role of MNCs; Globalization of Indian Economy; Impact of WTO on Indian Agriculture.

Basic Reading List

- Reserve Bank of India (1989), Report of the Agricultural Credit review Committee, Reserve Bank of India, Bombay.
- Kauar, R. (1975), Agricultural Price Policy in economic Development, Kalyani Publishers, Delhi
- Bhalla G.S (1994), economic Liberalization and Indian Agriculture, Institute for Studies in Industrial Development, New Delhi
- Dhawan, B.D (1988), Irrigation in India's agricultural Development, Sage Publications, New Delhi
- Desai, G and A Vaidyanathan (eds.) (1995), Strategic Issues in future Growth of Fertiliser Use in India, Macmillan, New Delhi.

ECONOMETRICS – II

Course Code: Eco/4/SC-04B

Objectives: To build the capacity of the students in handling simultaneous econometric models and modeling of time series data and the estimation of multivariate data.

Outcomes: Students can handle techniques of identification and estimation of simultaneous econometric models and can examine the nature of trends of time series data and make forecasts.

Unit-1: Simultaneous Equation Models: Single Equation Models

Concept and nature of simultaneous equations; simultaneous equation bias and inconsistency of OLS estimators; identification problem; rules of identification - order and rank conditions; Methods of estimating simultaneous equation system; Recursive methods and OLS; Indirect least squares (ILS); 2SLS, 3SLS and ML methods.

Unit-2: Time Series Econometric

Time series problems and components of time series; Trend analysis of time series – free hand, semi-average, least squares methods. Nature of stochastic process - stationarity, unit roots, integrated, random walk, co-integration, spurious regression; Dickey-Fuller test and Augmented Dickey-Fuller test, Engle-Granger test, Johansen test. Test for time series causality – Granger-Causality test.

Unit-3: Time Series Modelling

AR(p) and MA(q) models; Forecasting with ARIMA modelling; Box-Jenkins methodology; Vector autoregression (VAR); Error Correction Mechanism; Measurement of volatility – ARCH and GARCH models, applications and interpretations of empirical results.

Unit-4: Alternative Econometric Methods

Estimation of Panel data regression - Fixed effects models and Random effect models. Multivariate Analysis – Principal Component analysis, Discriminant analysis and Canonical correlations.

Basic Reading List

- Chow, G.C. (1983). *Econometrics*, McGraw Hill, New York.
- Davidson, Russel and James C. Mackinnon (2003), *Econometric Theory and Methods*, Oxford University Press, New York.
- Gujarati, Damodary, N and Sangeetha (2007), *Basic Econometrics*, (4th Ed), Tata McGraw-Hill, New Delhi.
- Intrilligator, M.D. (1978). *Econometrics Models, Techniques and Applications*, Prentice Hall, Engelwood Cliffs, New Jersey.
- Johnston, J (1960). *Econometric Methods* (2nd. Edn.). McGraw Hill, Tokyo.
- Johnston, J. and J. Di Nardo (1997). *Econometric Methods*. The McGraw Hill Companies Inc.
- Judges Griffiths Hill, Lutkepohl and Lee (1994). *The Theory and Practice of Econometrics*, 4th Edn. John Willey & Sons.
- Kmenta, J (1997). *Elements of Econometrics* (2nd Edition). University of Michigan Press Ltd., New York.
- Koutsoyannis, A (1977). *Theory of Econometrics* (2nd. Edn.). The Macmillan Press Ltd., London.
- Theil, H. (1971). *Principles of Econometrics*, John Wiley & Sons Inc.
- Gujarati, D.N (1995). *Basic Econometrics* (2nd edn.) McGraw Hill, New Delhi.

Additional Reading List.

- Madalla, G.S. (1997). *Econometrics*. McGraw Hill, New York.
- Theil, H. (1981). *Introduction to Econometrics*, Prentice Hall of India. New Delhi.
- Intriligator, M.D (1980). *Econometric Models, Techniques, and Applications*, Prentice-Hall of India, New Delhi.
- Johnston, J. and Jack Dinardo (1997). *Econometric Methods*, McGraw Hill.
- Croxton, F.E., D.J. Cowden and S. Klein (1973). *Applied General Statistics*. Prentice Hall of India. New Delhi.
- Green, W. (2000). *Econometrics*, Prentice Hall of India, New Delhi.