



PREAMBLE:

The syllabus has been revised in view to understand recent trends in the subject of economics .The Board of Studies in Economics has revised the syllabi of papers at the TYBA which will be made effective from the Academic Year 2018-19. In this revision, some of the existing optional papers have been replaced by new papers. A broad overview of the structure, followed by the syllabi of individual papers, is given below.

DURATION:

- The course shall be a full time course.
- The duration of B.A. course shall be of Three years /Six Semesters.

FYBA: SEMESTER – I & II (One paper each semester)

SYBA: SEMESTER – III & IV (Two papers each semester)

TYBA: SEMESTER – V & VI (Six papers each semester)

PATTERN:

The T.Y.B. A. [Entire Economics] Course shall have 12 papers. Every semester shall have six papers, each carrying 100 marks. However students can opt combination of any two subjects (Economics and any other subject). Every semester shall have three papers of each subject, carrying 100 marks.

SCHEME OF EXAMINATION:

- **Duration – Three Hours** for each paper.
- There shall be five questions each of 20 marks.
- All questions shall be compulsory with internal choice within the questions.
- Questions may be subdivided into sub-questions a, b, c and the allocation of marks shall depend on the weightage given to the topic.

Questions	Modules	Marks
Qu.1	Unit I	20
Qu.2	Unit II	20
Qu.3	Unit III	20
Qu.4	Unit IV	20

Qu.5	4 sub-questions from Unit I, II, III & IV	20
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COURSE STRUCTURE (APPLICABLE FROM ACADEMIC YEAR 2018 – 2019)

TYBA (SEMESTER – V)

COURSE CODE		REVISED PAPER	CREDIT	MARKS
GROUP-I		COMPULSORY PAPERS		
ECOMIC501	VII	MICROECONOMICS III	4	100
ECODEV502	VIII	ECONOMICS OF DEVELOPMENT	4	100
GROUP-II		ELECTIVE PAPERS		
ECOFEA503	IX	FINANCIAL ECONOMICS	3	100
		OR		
ECOEHIB503	IX	ECONOMIC HISTORY OF INDIA:1857-1947	3	100
		OR		
ECOILEC503	IX	INDUSTRIAL AND LABOUR ECONOMICS	3	100
ECOMSEAA504	X	MATHEMATICAL AND STATISTICAL TECHNIQUES FOR ECONOMIC ANALYSIS	4	100
		OR		
ECOMMEB504	X	MATHEMATICAL METHODS IN ECONOMICS	4	100
		OR		
ECOREMC504	X	RESEARCH METHODOLOGY	4	100
		OR		
ECOEACD504	X	ECONOMICS OF AGRICULTURE AND COOPERATION	4	100
ECOITEA505	XI	INTRODUCTION TO ECONOMETRICS	4	100

OR				
ECOENVEB505	XI	ENVIRONMENTAL ECONOMICS	4	100
OR				
ECOPROA506	XII	PROJECT	3	100

TYBA (SEMESTER –VI)

COURSE CODE		REVISED PAPER	CREDIT	MARKS
GROUP-I				
COMPULSORY PAPERS				
ECOMAE601	XIII	MACROECONOMICS III	4	100
ECOINE602	XIV	INTERNATIONAL ECONOMICS	4	100
OR				
GROUP-II				
ELECTIVE PAPERS				
ECOIFSA603	XV	INDIAN FINANCIAL SYSTEM	3	100
OR				
ECOIETB603	XV	INDIAN ECONOMIC THOUGHT	3	100
OR				
ECOILEC603	XV	INDUSTRIAL AND LABOUR ECONOMICS	3	100
OR				
ECOMSEA604	XVI	MATHEMATICAL AND STATISTICAL TECHNIQUES FOR ECONOMIC ANALYSIS	4	100
OR				
ECOAEB604	XVI	APPLIED ECONOMETRICS	4	100
OR				
ECOREMC604	XVI	RESEARCH METHODOLOGY	4	100
OR				
ECOEACD604	XVI	ECONOMICS OF AGRICULTURE AND COOPERATION	4	100
OR				
ECOITEA605	XVII	INTRODUCTION TO ECONOMETRICS	4	100

OR				
ECOPUEB605	XVII	DEVELOPMENT THEORY AND EXPERINENCE	4	100
OR				
ECOPEG605	XVII	POLITICAL ECONOMY OF GLOBALIZATION	4	100
OR				
ECOPROA606	XVIII	PROJECT	3	100

MICROECONOMICS III: PAPER VII

Preamble:

The course is designed to provide sound training in microeconomic theory. Since students have already studied the perfect competition, the focus of this course is on the study of imperfect completion and general equilibrium and welfare economics.

SEMESTER –V

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - I	COMPULSORY PAPERS		
ECOMIC501	MICROECONOMICS III: PAPER VII	4	100

Module I: Monopoly – sources of monopoly - Profit maximising monopoly – calculation of price, output and profit for a monopoly – price discrimination: First and third degree-public policy towards monopoly.

Module II: Basics of Game theory – Prisoner’s dilemma – dominant strategy equilibrium – Battle of sexes game – Nash equilibrium – Extensive form games – game tree - Solving finite extensive form game.

Module III: Oligopoly – the Cournot model – the Bertrand model - the Edgeworth model – the Chamberlin model – the Kinked demand curve model – Collusion and Cartels – Price Leadership.

Module IV: General Equilibrium and Welfare Economics – Interdependence in the Economy – General Equilibrium and its Existence -The Pareto Optimality Condition of Social Welfare,

Marginal Conditions for Pareto Optimal Resource Allocation, Perfect Competition and Pareto Optimality - Kaldor- Hicks Compensation Criterion - Arrow's Impossibility Theorem.

References:

1. Koutsoyannis, Modern Microeconomics, Macmillan Press Ltd., London.
2. Mankiw, N. Gregory, Principles of Microeconomics, 7th edition, Cengage Learning, 2015
3. Mansfield, Edwin; Micro-economics: Theory & Applications, 5th edition, W.W. Norton & Company, New York, 1985.
4. Sen Anindya (2007), Microeconomics: Theory and Applications, Second edition Oxford University Press, New Delhi, 2007.
5. Salvatore, D.; Microeconomics : Theory and Applications , New Delhi Oxford, New Delhi, Oxford University Press 2006.
6. R.Gibbons (1992) : A Primer in Game Theory, Harvester Wheatsheaf.

MACROECONOMICS III: PAPER XIII

Preamble:

This course introduces the students to formal modelling of a macroeconomic theory with analytical tools. It discusses goods market with fixed exchange rate, the money market, uncovered interest rate parity and the benefits and costs of fixed and flexible exchange rate

SEMESTER –VI

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - I	COMPULSORY PAPERS		
ECOMAE601	MACROECONOMICS III: PAPER XIII	4	100

Module 1: The Goods Market in the Open Economy

Trade Balance and its implications for GDP calculations; Export and Import Functions; The Real Exchange Rate and why it matters; Why equilibrium GDP is consistent with a trade imbalance; Fiscal and Exchange Rate Policy with a Fixed Exchange Rate

Module 2: Money/Financial Markets and Mundell-Fleming

The LM equation for the open economy; Uncovered Interest Parity and its implications for exchange rate determination; The combined IS/LM/UIP model; Fiscal and Monetary Policy under Fixed and Flexible Exchange Rates; The Mundell-Fleming trilemma

Module 3: Exchange Rate Regimes & Exchange Rate Crises

The choice of regime, Fixed or Flexible; The spectrum of arrangements from Hard Peg at one end to Fully Floating at the other; Why the Balance of Payments must always balance under Floating Exchange Rates but need not balance under a Fixed or Managed Exchange Rate regime; The operational aspects of fixing; How a fix might come apart; Exchange Rate crises; The relation between Exchange Rate crises and other kinds of crises (banking crises, financial crises, etc.)

Module 4: International Monetary History, 1900-present

The Gold Standard; The Inter-War Period and the Great Depression; The key issues debated at Bretton Woods and the system that emerged as a result of those debates; 1971 and the collapse of the Bretton Woods system; Fixing in Europe via ERM, and the Dollar Standard elsewhere; The Maastricht Treaty and preparations for the Euro; The Global Financial Crisis and its consequences for the Euro; The Euro Crisis; Chinese ambitions in the present day

References:

1. Blanchard, Oliver; *Macroeconomics* (4th edition, 9th impression), Pearson education, New Delhi, India.
2. Dornbusch R S, Fischer and R Startz; *Macroeconomics*, 8e Tata Mc Grow Hill, New Delhi 2004.
3. Froyen, R. T.; *Macroeconomics : Theory and Policy*, Pearson Education Asia, Delhi 2001.
4. Mankiw, Gregory; *Macroeconomics*, 6e, Worth Publishers, New York, 2003.
5. Salvatore, D.; *International Economics*, Printice Hall, New York, 1997 .
6. Robert Feenstra & Alan Taylor, *International Macroeconomics*, 2nd ed.
7. Yannis Varoufakis, *The Global Minotaur*

ECONOMICS OF DEVELOPMENT: PAPER VIII

SEMESTER –V

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - I	COMPULSORY PAPERS		
ECODEV502	ECONOMICS OF DEVELOPMENT: PAPER VIII	4	100

Module 1: Concepts of Economic Growth and Development

Meaning of Growth and Development, Distinction between growth & development, Concept of human development, HDI, GDI, Sustainable development, Green GDP, Three core values of development, Capabilities & functioning

Module 2: Structural Issues in Development Process

Big push theory, Theory of human capital, Role of Education, health & nutrition in economic development, Schumpeter's theory of development, dual economy models of growth, Solows growth model

Module 3: Inequality, Poverty and Development

Measures of poverty and inequality, Kuznets inverted U-hypothesis, Policy options for poverty alleviation, Inclusive growth, Rural credit institutions.

Module 4: Technology and Economic Development

Role of Infrastructure in economic development, Role of technology in economic development, types of technical progress, Intermediate/ Appropriate technology, Green technology,

References:

- 1 Todaro, Michael P. and Stephen C. Smith. Economic Development, 8e. Delhi: Pearson Education, 2003.
2. Thirlwall, A.P. Growth and Development 8e. New York: Palgrave MacMillan, 2005.
3. Meier, Gerald M. and James E. Rauch. Leading Issues in Economic Development, 8e. New Delhi: Oxford Univ. Press, 2006.

INTERNATIONAL ECONOMICS: PAPER XIV

Preamble

This course develops a systematic exposition of models that try to explain the composition, direction, and consequences of international trade, and the determinants and effects of trade policy. It then builds on the models of open economy macroeconomics developed in courses 08 and 12, focusing on national policies as well as international monetary systems. It concludes with an analytical account of the causes and consequences of the rapid expansion of international financial flows in recent years. Although the course is based on abstract theoretical models, students will also be exposed to real-world examples and case studies.

SEMESTER –VI

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - I	COMPULSORY PAPERS		
ECOINE602	INTERNATIONAL ECONOMICS: PAPER XIV	4	100

Module 1: Introduction

What is international economics about? An overview of world trade.

Module 2: Old Theories of International Trade

The Ricardian, specific factors, neoclassical trade theory and Heckscher-Ohlin models, Stolper-Samuelson theorem.

Module 3: New trade theories of International Trade

Monopolistic competition and trade-firm heterogeneity, FDI and the global supply chain

Module 4: Trade Policy

Instruments of trade policy; Why countries cooperate and GATT, GATS, Regional Trade Agreements-controversies in trade policy (labor standards, IPR and environment)

References:

1. Paul Krugman, Maurice Obstfeld, and Marc Melitz, *International Economics: Theory and Policy*, Addison-Wesley (Pearson Education Indian Edition), 9th edition, 2012.
2. Dominick Salvatore, *International Economics: Trade and Finance*, John Wiley International Student Edition, 10th edition, 2011.

3 Gordon Hanson, “The Rise of Middle Kingdoms: Emerging Economies in Global Trade”, *Journal of Economic Perspectives*, Spring 2012.

4 Melitz M. and Trefler D., “Gains from Trade When Firms Matter”, *Journal of Economic Perspectives*, Spring 2012.

FINANCIAL ECONOMICS: PAPER IX

Preamble:

The course introduces students to the economics of Finance. It aims at imparting knowledge about the basic models of investment and portfolio analysis, including the CAPM. The valuation of assets, derivatives & options is to be studied in addition to patterns of corporate financing.

SEMESTER – V

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - II	ELECTIVE PAPERS		
ECOFEA503	FINANCIAL ECONOMICS: PAPER IX	3	100

Module1: Investment & portfolio Analysis

Basic theory of interest, discounting & present value; internal rate of return, evaluation criteria , fixed income securities; bonds prices & yields. Structure of interest rate, yield curves, spot & forward rates. Portfolio of assets, random asset returns, Mean variance portfolio analysis, The Markowitz Model & two fund theorem.

Module 2: CAPM

The capital Market line, the CAP Model, the beta of an asset & of a portfolio, security market line, CAPM model in investment & pricing formula.

Module 3: Options & Derivatives

Meaning & types of derivatives: forward contracts, futures - forward & future prices, stock index futures, interest rate futures, future for hedging. Options & Swaps and their types- Option market: call & put options, option trading strategies- spreads, straddles, strips & straps, strangles, the principle of arbitrage. Participants of derivatives market- hedgers, speculators, arbitrageurs.

Module 4: Corporate Finance

Patterns of corporate financing: stock, debt, preferences, convertibles. Capital structure & the cost of capital, corporate debt & dividend policy, the Modigliani –Miller theorem.

Readings:

1. David Luenberger (1997); Investment Science, Oxford University Press.
2. Hull John C. (2005); Options, Futures and other derivatives, Pearson Education 6th Edition.
3. Thomas Copeland, J. Fred Weston and Kuldeep Shastri (2003); Financial Theory and Corporate Policy, Prentice Hall 4th Edition.
4. Richard Brealey and Stewart Myers (2002); Principles of Corporate Finance, McGraw Hill 7th Edition.
5. Stephen Ross and Bradford Jordan (2005); Fundamentals of Corporate Finance, McGraw Hill 7th Edition.
6. William Sharpe, Gordon Alexander and J. Bailey (2003); Investment, Prentice Hall of India 6th Edition.

INDIAN FINANCIAL SYSTEM: PAPER XV

Preamble: The basic purpose of this paper is to acquaint students with various components of the Indian financial system, its working and the trends and turns that have taken place over the years especially since financial sector reforms.

SEMESTER – VI

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - II	ELECTIVE PAPERS		
ECOIFSA603	INDIAN FINANCIAL SYSTEM : PAPER:XV	3	100

Module I: Indian Financial System: Structure, Trends and Turns (10 lectures)

Meaning and components of the Financial System - Financial System and Economic Development - Indicators of Financial Development: FR, FIR, NIR and IR. – Overview of financial sector reforms since 1990s – Trends and turns in Indian financial sector: 1950-2017.

Module II: Banking in India since 1990s (10 lectures)

Developments in Commercial banking sector since 1990s – Management of Non-Performing Assets (NPAs); Capital Adequacy Norms - Basel Accord III.- Monetary policy of the RBI –Changes in RBI monetary policy since 1990s - Transmission Channels of Monetary policy.

Module III: Money and Capital Markets in India

(10 lectures)

Money Market: Components of organized money market – Reforms in the money market - Features of Indian Money Market.

Capital Market: Structure of the Indian Capital Market – Recent Developments in the Capital Market – Role of SEBI - Interlink between Money Market and Capital Market - Overview of Debt Market in India.

Module IV: Non-Banking sector of the Financial System

(10 lectures)

Non-Bank Finance Companies (NBFCs) in India and their progress - Developments in India's Insurance sector – Progress of Mutual Funds industry in India - Credit Rating Agencies in India.

References:

1. Pathak, Bharati (2008): The Indian Financial System –Markets, Institutions, and Services, (2nd Edition), Pearson Education, New Delhi.
2. Bhole, L. M. (2008): Financial Institutions and Markets, Growth and Innovation, Tata McGraw-Hill, New Delhi.
3. Khan, M.Y. (2007): Financial Services, Tata McGraw Hill, New Delhi.
4. Reserve Bank of India (various issues) Report on Currency and Finance, RBI, Mumbai.
5. Rakesh Mohan & Partha Ray (2017), Indian Financial Sector: Structure, Trends & Turns; IMF Working Paper (WP/17/7). (<https://www.imf.org> > Issues > 2017/01/20).

ECONOMIC HISTORY OF INDIA: 1857-1947: PAPER IX

Preamble:

This course analyses key aspects of Indian economic development during the second half of British colonial rule. It investigates the place of the Indian economy in the wider colonial context, and the mechanisms that linked economic development in India to the colonial rule.

SEMESTER – V

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - II	ELECTIVE PAPERS		
ECOEHIB503	ECONOMIC HISTORY OF INDIA: 1857-1947 : PAPER IX	3	100

Module1: Growth and Structural Change 1857-1947

Measuring Change-Explaining Change-Globalisation and patterns of trade-Saving and Investment-
Public Finance -Balance of Payments

Module 2: Agriculture and the Commons

Trends in Production and Income-Resources, Regional dimensions of agriculture- land, labour and
credit markets- forests and forest-dependent peoples-village commons and pastures-land use
patterns

Module 3: Industry

Long term patterns of small scale industrialisation and its interpretation- handloom, weaving and
other industries- labour and capital in traditional small scale industry- modern small scale industry-
statistical outline of large scale industry- stages of industrialisation and major industries- labour,
finance, entrepreneurship and management in large scale industry

Module 4: Infrastructure, Fiscal and Monetary systems:

Impetus- Irrigation- Railways- Roads and Internal Waterways- Ports- Post and Telegraph- Power-
Legal- systems Economic policy and policy making-Trade policy- Fiscal systems- Monetary
system- prices.

References:

1. Tirthankar Roy, *The Economic History of India 1857-1947*, Oxford University Press, 3rd edition,2011.
2. S.Sivasubramonian, *National Income of India in the Twentieth Century*, Oxford University Press,2000
3. Sumit Guha (ed.), *Growth, Stagnation or Decline?*, Delhi , Oxford University Press,1993
4. A.K. Banerji, *India's Balance of Payments*, Bombay: Asia Publishing House,1962.

5. George Blyn, *Agricultural Trends in India, 1891-1947: Output, Availability and Productivity*, Philadelphia: University of Pennsylvania press, 1966
6. M.Gadgil and R. Guha, *The Fissured Land: An Ecological History of India*, Delhi: Oxford University Press, 1992.
7. Alice Thorner, The Secular Trend in the Indian Economy, 1881-1951, *Economic Weekly*, vol.14, 1962.
8. Dharma Kumar, "The Fiscal System" in *The Cambridge Economic History of India*, Dharma Kumar (ed.), vol. 2, pp.905-46, Cambridge, 1983.
9. M.J.K.Thavaraj, 'Capital Formation in the Public Sector in India: A Historical Study, 1898-1938', in *Papers on National Income and Allied Topics*, V.K.R.V.Rao(ed.), Delhi: Allied Publishers, 1962.

INDUSTRIAL AND LABOUR ECONOMICS: PAPER IX

Preamble:

There has been a paradigm shift in the structure of the Indian industrial sector and the policies governing it ever since the new era of globalisation and liberalisation has ushered in. This paper intends to equip the students with the knowledge about the fundamentals of Industrial Economics and also the latest policies relating to the Indian industry.

SEMESTER V

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - II	ELECTIVE PAPERS		
ECOILEC503	INDUSTRIAL AND LABOUR ECONOMICS: PAPER IX	3	100

Module 1: Introduction

Meaning and Scope of Industrial Economics, Industrial Profile : Private sector - Performance and Problems; Cooperatives - features, types, merits and demerits; Public Sector - Role, Performance and Problems, Diversification and Industrial Combinations - Motives for Mergers and Acquisitions

Module 2: Industrial Location and Problem of Regional Imbalance

Determinants of Industrial Location, Theories of Industrial Location - Weber's and Sargent Florence's Theories, Dispersion of Industries and the Problem of Regional Imbalance

Module 3: Industrial Productivity and Industrial Sickness

Concept and Measurement of Industrial Productivity, Factors Affecting Industrial Productivity, Industrial Sickness - Causes, Effects and Remedial Measures, Rationalisation - Concept, Aspects and Impact

Module 4: Industrial Development in India

New Industrial Policy, 1991; Disinvestment Policy; Micro, Small and Medium Enterprises Development Act, 2006; National Manufacturing Policy, 2011, Recent Trends in India's Industrial Growth, Role of MNCs in the Indian Economy - Merits and Demerits, Issues in Industrial Proliferation and Environment Preservation; Pollution Control Policies

References:

- Agrawal A.N. (2011), Indian Economy, New Age International Publishers, New Delhi
- Barthwal R.R. (2007), Industrial Economics, New Age International Publishers, New Delhi
- Cherunilam, F. (1994), Industrial Economics: Indian Perspective, Himalaya Publishing House, Mumbai
- Datt R. and Sundaram K.P.M. (2009), Indian Economy, S.Chand & Co., New Delhi
- Desai S.S.M. and Bhalerao N (2008), Industrial Economy of India, Himalaya Publishing House, Mumbai
- Ekbote Vidya and Ekbote Vilas (1999), Industrial Economics, Anmol Publication, Pune
- Kuchhal S.C. (1980), Industrial Economy of India, Chaitanya Publishing House, Allahabad
- Mishra S.K. and Puri V.K.(2008), Indian Economy, Himalaya Publishing House, Mumbai
- Ranjana Seth, Industrial Economics (2010), Ane Books Pvt. Ltd., New Delhi
- Reasons Behind Mergers
- National Manufacturing Policy, 2011 - Department Of Industrial ...

- The Micro, Small and Medium Enterprises Development Act, 2006 .
- Micro, Small and Medium Enterprises (MSMEs) in India: An Appraisal
- Industrial Growth and the Environment - of Planning Commission

PREVENTION AND CONTROL OF POLLUTION - Ministry of ...

- Sinha V.C., Sinha P. and Sinha V. (2001), Industrial Economics, Lokbharati Publication, 15 - A, Mahatma Gandhi Marg, Elahabad
- Raykhelkar A.R. and Damji B.H. (2011), Industrial Economics, Vidya Books Publication, Aurangabad, Maharashtra

INDIAN ECONOMIC THOUGHT: PAPER XV

Preamble:

The history of Indian economic thought provides rich insights into both economic issues and the workings of the Indian mind. It will give the student an introduction to major Indian thinkers and their ideas on Indian economic policy.

SEMESTER VI

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - II	ELECTIVE PAPERS		
ECOIETB603	INDIAN ECONOMIC THOUGHT: PAPER XV	3	100

Module 1: The Modernists

Naoroji:-Drain theory, criticism and long run relevance, Ranade's views on railway investment and the methodology of Indian economics, Gokhale:-Gokhale and the economics of education, the rupee ratio debate , Dr. Ambedkar's contribution to the rupee debate

Module 2: Agriculture, Poverty and Famines

Why famines occur, famine policy, criticism of famine policy, Ranade's views on Poverty and Industrialisation, agrarian policy, contribution of Dr. Ambedkar

Module 3: Economic Policy after Independence

Nehruvian economics –Mahalonobis model and planning, industrial stagnation, industry and trade, agriculture and the wage goods model , reappraisal of Nehru’s economics

Module 4: Economic Thought in Contemporary India

Measurement of poverty, liberalisation, privatisation and globalisation, Human development and Amartya Sen’s contribution, Jagadish Bhagawati’s contribution.

References:

1. Jadhav Narendra (2015) : AMBEDKAR : An Economist Extraordinaire , Konark Publishers, New Delhi
2. Dasgupta A.K.(1993) : A History of Indian Economic Thought , Routledge.
3. Balkrishnan P. (2007) : The Recovery of India: Economic Growth in the Nehru Era, Economic and Political Weekly, Vol. 42, No. 45/46 (Nov. 10 - 23, 2007), pp. 52-66
4. A.Sen : Development as capabilities Expansion, http://morgana.unimore.it/Picchio_Antonella/Sviluppo%20umano/svilupp%20umano/Sen%20development.pdf
5. A.Pangariya: Why Growth Matters: How India’s Growth Acceleration has Reduced Poverty, http://www.cde.org.za/wp-content/uploads/2013/09/Prof%20Arvind%20Panagariya_Why%20growth%20matters_%20How%20Indias%20growth%20acceleration%20has%20reduced%20poverty.pdf
6. Deaton Angus(2013) : What is Going on in India, https://scholar.princeton.edu/sites/default/files/deaton/files/deaton_book_review_sen_dreze_etc_lancet_2013_0.pdf
7. A. Pangariya (2013): Indian Economy: Retrospect and Prospect, <http://www.pc.gov.au/news-media/lectures/arvind-panagariya/snape-2013-panagariya.pdf>

INDUSTRIAL AND LABOUR ECONOMICS: PAPER XV

Preamble:

Issues pertaining to the labour market, wage policy, trade unions and amicable solutions to industrial disputes have become vital for developing countries, especially for India, where the bulk of the labour force is employed in the unorganised sector, and the organized sector is witnessing a phenomenon of ‘jobless’ growth. This paper intends to provide knowledge of the same and also discusses the importance of labour welfare and social security measures for the growing labour force in India.

SEMESTER – VI

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - II	ELECTIVE PAPERS		
ECOILEC603	INDUSTIRAL AND LABOUR ECONOMICS: PAPER XV	3	100

Module I – Introduction – Indian Labour Market

- Characteristics of the Indian Labour Market
- Child Labour and Female Labour – Problems and Measures
- Globalisation and Indian Labour Market
- Labour Market Reforms – Exit Policy and Need for Safety Nets
- Second National Commission on Labour

Module II – Trade Unionism

- Definition and Functions of Trade Unions
- Historical Evolution of Trade Unions in India and Their Present Status
- Problems of Trade Unions in India
- Role of Outside Leadership

Module III – Industrial Relations

- Causes of Industrial Disputes and Their Settlement Mechanism
- Collective Bargaining – Concept, Features, Importance and Pre-requisites for Successful Collective Bargaining
- Collective Bargaining in India
- Workers’ Participation in Management – Concept, Objectives and Forms of Workers’ Participation in India

Module IV – Labour Welfare and Social Security

- Concept, Theories and Principles of Labour Welfare
- Agencies for Labour Welfare
- Role of the Labour Welfare Officer
- Social Security – Concept; Social Assistance and Social Insurance
- Social Security Measures in India
- International Labour Organisation and Its Impact on Indian Labour Legislations

References:

- Agrawal A.N. (2011), Indian Economy, New Age International Publishers, New Delhi
- Datt R. and Sundaram K.P.M. (2009), Indian Economy, S.Chand & Co., New Delhi
- Mamoria C.B. and Mamoria S. (2002), Dynamics of Industrial Relations, Himalaya Publishing House, Mumbai
- Mishra S.K. and Puri V.K.(2008), Indian Economy, Himalaya Publishing House, Mumbai
- Monappa A, (2006), Industrial Relations, Tata McGraw Hill Publishing Company Ltd., New Delhi
- Punekar S.D., Deodhar S.B. and Sankaran Saraswathi (2004), ‘Labour Welfare, Trade Unionism and Industrial Relations’, 2004
- Ratna Sen, Industrial Relations in India - Shifting Paradigms (2005), Macmillan, New Delhi
- Singh J.K. (1998), Labour Economics – Principles, Problems and Practices, Deep andDeep Publications Pvt. Ltd., New Delhi
- Sinha P.R.N., Sinha I.B. and Shekar S.P. (2006), Industrial Relations, Trade Unions and Labour Legislation, Pearson Education, New Delhi
- Sarma A.M. (2002), Industrial Relations, Himalaya Publishing House, Mumbai

MATHEMATICAL AND STATISTICAL TECHNIQUES FOR ECONOMIC ANALYSIS:

PAPER X

Preamble

A plethora of data has emerged at an exponential rate and it is the description, interpretation and understanding of these data and drawing of accurate conclusions that is imperative for a student of Economics. The aim of this paper is to provide students with the mathematical and statistical skills and understanding needed for ‘knowing why’ and ‘when’ to apply these techniques.

SEMESTER V

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - II	ELECTIVE PAPERS		
ECOMSEAA504	MATHEMATICAL AND STATISTICAL TECHNIQUES FOR ECONOMIC ANALYSIS: PAPER X	4	100

Module 1:

(Lectures 13)

A: Microeconomic applications of equations and graphs

- Linear and non-linear relationships in economic analysis
- Market demand and supply models, taxes, elasticity

B: Derivatives and their applications in various areas of economic analysis

- Derivatives
- Higher order derivatives
- Increasing and decreasing functions; Necessary and sufficient conditions for maxima and minima
- Optimisation of economic functions

Module 2: Linear Algebra

(Lectures 10)

- Matrices and basic operations on matrices
- Rank of a matrix
- Inverse of a matrix
- Cramer’s rule
- Input-Output Analysis and policy implications
- Linear Programming Problem: Formulation and graphical solution

Module 3:

(Lectures 12)

A: Descriptive Statistics and graphing techniques for presenting data

- Concept of primary and secondary data along with tabulation and graphs

- Measures of central tendency (only arithmetic-mean, median, and mode).
- Absolute and relative measures of dispersion (range, quartile deviation, mean deviation and standard deviation) with simple applications.
- Measures of skewness and kurtosis.
- Lorenz Curve

B: Commercial Statistics

- Brokerage, Commission and Insurance

Module 4: Elementary Probability Theory

(Lectures 10)

- Sample space and events
- Mutually exclusive, exhaustive and complimentary events
- Conditional probability
- Binomial probability distribution
- Nature and Properties of the Normal Probability Distribution; Standard Scores and the Normal Curve; The Standard Normal Curve: Finding Areas when the Score is Known, Finding Scores when the Area is Known

References:

1. Dowling Edward T: Introduction to Mathematical Economics, Schaum Outline Series in Economics, Tata McGraw -Hill, New Delhi, 2004.
2. Dowling Edward T: Theory and Problems of Mathematical Methods for Business and Economics, McGraw –Hill, 1993.
3. Gupta S.P.: Statistical Methods, S. Chand, New Delhi.
4. Lerner Joel J and P.Zima: Theory and Problems of Business Mathematics, McGraw Hill, New York, 1986.
5. Pfitzner Barry C.: Mathematical Fundamentals of Microeconomics, Biztantra, New Delhi, 2003.
6. Sancheti D.C. and V.K. Kapoor: Statistics-Theory, Methods and Applications, S. Chand, New Delhi
7. V. K. Kapoor and S. C. Gupta: Fundamentals of Mathematical Statistics, Sultan Chand & Sons, New Delhi.

8. Wisniewski Mik: Mathematics for Economics-An integrated approach, Palgrave Macmillan, 2013.

MATHEMATICAL AND STATISTICAL TECHNIQUES FOR ECONOMIC ANALYSIS:

PAPER XVI

SEMESTER VI

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - II	ELECTIVE PAPERS		
ECOMSEA604	MATHEMATICAL AND STATISTICAL TECHNIQUES FOR ECONOMIC ANALYSIS: PAPER XVI	4	100

Module1: Techniques and applications of partial derivatives (Lectures 13)

- Functions of several variables and partial derivatives
- Second order partial derivatives
- Optimisation of multivariable functions
- Constrained optimisation with Lagrange multiplier and its economic interpretation.
- Marginal productivity, Income and price elasticities of demand
- Homogeneous production functions and returns to scale
- Cobb-Douglas production function

Module 2: Integral Calculus (Lectures 12)

- Integration and Definite integral; area under the curve
- Economic applications
- Present value of cash flows (present value of a sum to be received in future and present value of a stream of future income)
- Consumer's and Producer's Surplus
- Learning curve

Module 3: Correlation and Regression (Lectures 10)

- The meaning and significance of Correlation; Scatter plot of Bivariate Distributions; Correlation and Causation

- Karl Pearson's coefficient of correlation
- Spearman's rank correlation coefficient
- Simple regression analysis- Method of Least Squares and Regression Lines
- Regression Coefficients
- Relationship between correlation coefficients and regression coefficients.

Module 4: Index Numbers and Time Series

(Lectures 10)

- Simple and composite index numbers
- Construction, uses and problems of index numbers
- Laspeyre's, Paasche's and Fisher's Index numbers
- Cost of living index numbers-real income – wholesale price index number
- Splicing of index numbers
- Components of time series
- Estimation and forecasting of trend by the Least Squares Method

References:

1. Dowling Edward T: Introduction to Mathematical Economics, Schaum's Outline Series in Economics, Tata McGraw Hill, New Delhi, 2004
2. Lerner Joel J and P. Zima: Theory and Problems of Business Mathematics, McGraw Hill, New York, 1986.
3. Dowling Edward T: Theory and Problems of Mathematical methods for Business and Economics, McGraw –Hill, 1993
4. Gupta S.P.: Statistical Methods, S. Chand, New Delhi.
5. Sancheti D. C. and V. K. Kapoor: Statistics-Theory, Methods and Applications, S. Chand, 4New Delhi

MATHEMATICAL METHODS IN ECONOMICS: PAPER X

Preamble:

The objective of this paper is to transmit the body of basic mathematics that enables the study of economic theory at the undergraduate level, specifically the courses on microeconomic theory,

macroeconomic theory, statistics and econometrics set out in this syllabus. In this course, particular economic models are not the ends, but the means for illustrating the method of applying mathematical techniques to economic theory in general. The level of sophistication at which the material is to be taught is indicated by the contents of the prescribed textbook.

SEMESTER V

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - II	ELECTIVE PAPERS		
ECOMMEB504	MATHEMATICAL METHODS IN ECONOMICS: PAPER X	4	100

Module 1: Functions of one real variable

Graphs; elementary types of functions: quadratic, polynomial, power, exponential, logarithmic; sequences and series: convergence, algebraic properties and applications; continuous functions: characterizations, properties with respect to various operations and applications; differentiable functions: characterizations, properties with respect to various operations and applications; second and higher order derivatives: properties and applications.

Module 2: Single-variable optimization

Geometric properties of functions: convex functions, their characterizations and applications; local and global optima: geometric characterizations, characterizations using calculus and applications.

Module 3: Integration of functions

Areas under curves; indefinite integrals; the definite integral.

Module 4: Difference equations

First order difference equations.

References:

1. K. Sydsaeter and P. Hammond, *Mathematics for Economic Analysis*, Pearson Educational Asia, Delhi, 2002.

APPLIED ECONOMETRICS: PAPER XVI

Preamble:

The aim of this course is to provide a foundation in applied econometric analysis and develop skills required for empirical research in economics. Topics include specification and selection of regression models, dynamic econometric models, advanced methods in regression analysis and panel data models. Since the emphasis is on application of methods, this course requires understanding of econometric software and computing skills.

SEMESTER VI

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - II	ELECTIVE PAPERS		
ECOAE604	APPLIED ECONOMETRICS: PAPER XVI	4	100

Module 1: Violations of Assumptions in the Linear Regression model

Heteroscedasticity, implications, testing and remedy, autocorrelation, implications, testing and remedy, multicollinearity

Module 2: Regression Diagnostics and Specification

Misspecification; functional forms; model selection, endogeneity and instrumental variables

Module 3: Advanced Topics in Regression Analysis

Dynamic Econometric Models: distributed lag models; autoregressive models; simultaneous equation models.

Module 4: Introduction to R

Running a regression in R, diagnostic tests in R, plotting graphs in R, writing a function in R

Readings:

1. Jeffrey M. Wooldridge, Econometrics, Cengage Learning, India Edition, 2009.
2. Dimitrios Asteriou and Stephen Hall, Applied Econometrics: A Modern Approach, Palgrave Macmillan, 2007.
3. Damodar Gujarati, Econometrics by Example, Palgrave Macmillan, 2011.
4. Kleiber C and Zeilis A (2008) : Applied Econometrics with R, Springer, UseR1

RESEARCH METHODOLOGY: PAPER X

Preamble

The central focus of this course is an introductory study of the concepts, principles and methods of economic research. The course focuses on the logic of social science research and on practical problems of applying quantitative and qualitative methods in the process of formulating research questions. The primary goal is to strengthen student's critical thinking and reasoning skills at planning economic research and to enable them to communicate research results competently.

The study equips the students with the basic understanding of the research methodology and provides an insight into the application of modern analytical tools and techniques for the purpose of economic decision making. The course will provide students an opportunity to learn how to collect and analyze primary and secondary data. Methods covered include interview design and technique, case study method and also a study of secondary data sources. Computer Applications to research analysis and tools commonly used in research are introduced to sharpen the analytical and presentation skills of the learner.

The course is to be taught in two parts in the fifth and sixth semester of final year B.A. degree course in Economics. The entire course is to be conducted from an interdisciplinary perspective. The first part covers the structure of research and theory construction, types of research as well as the main issues of data gathering and data quality and learning of basic statistical tools. The second part provides an overview of the main methodological problems of quantitative and qualitative analysis, an introduction to hypothesis formulation, testing of hypotheses and illustrates the usage of different approaches and application of computers in recent empirical social research.

The course work of this paper will be taught in each semester. There are four units in each semester and each unit will be taught in 10 contact hours. The contact hours allotted to individual unit are notional and are adjustable to the total contact hours. In addition, a learner is expected to undertake practice on quantitative techniques and carry out computer practical exercise to grasp the nuance of fundamental statistical analysis using computers. The contact tools like discussion, group work, seminar, use of web resources and library resources are to be extensively used for teaching this paper. Hands on experience on web search, Practical sessions in the computer laboratory and Library sessions and are inbuilt requisites of this course.

The course in each Semester is categorized into three components;

- (a) Conceptual clarity on Research Methodology with 40 marks weightage
- (b) Numerical problems on Quantitative Techniques with 20 marks' weightage and

(c) Conduct of a case study, framing of schedule and questionnaire and field visit report as a project and/or Computer Application and Practical on Quantitative Techniques with 40 marks' weightage (for internal assessment.) Also an introduction to presentation tool is to be imparted with Training on Creating presentation, Customizing presentation and showing presentation as integral part of internal assessment.

SEMESTER V

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - II	ELECTIVE PAPERS		
ECOREMC504	RESEARCH METHODOLOGY: PAPER X	4	100

Module 1: Introduction to Concept of Research

(10 lectures)

- Nature, Scope & Purpose of social research
- Basic assumptions of research
- Significance of social sciences research
- Objectivity in social sciences research
- Types of research: pure & applied research; formulative or exploratory research; descriptive research, historical research, experimental research, survey research
- Ethical issues relating to research
- Major Difficulties in the Area of economic research

Module 2: Elements of Research Methodology

(15 lectures)

I. Steps in Research process:

- Identification, selection and formulation of research problem – sources of research problem – criteria of a good research problem
- Review of literature
- Formulation of hypothesis
- Preparing Research Design: Definition, Concepts, and types– exploratory, descriptive and diagnostic, experimental and Analytical research designs
- Collecting and analysing the data
- Interpretation and report writing

II. Use of web search in research process- introduction to Internet and WWW, Using search engine like Google, Yahoo etc. Use of advanced search techniques

Module 3: Sources of Data for Research

(15 lectures)

I. Types of data sources: Primary and Secondary, choice between primary and secondary data

- Primary data-Meaning and Collection methods
 - i. Observational method
 - ii. Interview technique
 - iii. Design of Schedule and Questionnaire
 - iv. Survey method and Field Visits
 - v. Case Study as a method
- Major Sources of Secondary data: Meaning, advantages, Relevance, limitations and cautions of secondary data.

II. Sampling Technique: Census and sample survey- Essentials of a good Sampling - Advantages and limitations of sampling, Methods of sampling:

- i. random sampling : simple or unrestricted random sampling- mixed or stratified random sampling, systematic or quasi random sampling – multistage or cluster random sampling - sequential random sampling
- ii. non random sampling : judgement or purposive sampling–convenience sampling accidental sampling – quota sampling

Sampling and Non-sampling errors - Sample size – selecting an appropriate sampling technique

Module 4: Processing and Analysis of Data

(10 lectures)

- Classification, Tabulation and Graphical presentation of socio-economic data
- An introduction to Statistical Analytical Tools – Measures of Central Tendency – Measures of Variation: absolute and relative measures – Quartile deviation, standard deviation, coefficient of variation- Skewness: meaning and Measurement (Karl Pearson's and Bowley's methods)
- Preliminaries of Computer Applications in Data organization & Data Processing Introduction to spreadsheet application, features and functions, Using formulas and functions, Data storing, Features for Statistical data analysis, Graphical representation of data, Generating charts/ graph and other features.

SEMESTER – VI

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - II	ELECTIVE PAPERS		
ECOREMC604	RESEARCH METHODOLOGY: PAPER XVI	4	100

Module 1: Statistical applications in research (15 lectures)

- Methods of studying Correlation- measurement of simple correlation: graphic method: scatter diagram - coefficient of correlation - Karl Pearson and rank correlation interpretation of $r = \pm 1$
- Linear Regression analysis: meaning, regression lines, regression coefficients, regression equations, relationship between correlation and regression
- Analysis of Time Series – components –trend analysis- moving averages (3, 4 and 5 yearly)- method of least square

Module 2: Index numbers (15 lectures)

Meaning – classification – problems encountered while constructing index numbers- uses and limitation of index numbers

Methods of constructing index numbers:

- Simple index: i) aggregate method ii) simple average of relatives method
- Weighted index: Laspeyer's, Paache's and Fisher's index – weighted average of relatives method
- Chain based index – concepts of Base shifting, splicing, and deflating
- Consumer price index: meaning, need and construction – methods: aggregate expenditure method and family budget method

Module 3: Hypothesis formulation and Hypothesis Testing (10 lectures)

- Definition and functions of hypothesis –Criteria of workable hypothesis – forms and sources of hypothesis
- Concepts in Testing of Hypothesis: Universe / Population, parameter and statistic, Null and Alternative Hypotheses, Levels of Significance, critical region, Type I and type II errors - Point and Interval Estimates

Module 4: Research Report Writing (10 lectures)

Types of Research Report: Technical, Popular, Interim, Summary, Article

- Format of a Research Report
- Principles of writing the Research Report: Organization and Style - Contents-Styles of reporting- Steps in drafting Reports- Editing the final draft-Evaluating the final draft - Organization of the Research Report: Preliminaries, Contents of Report, Structuring the Report: Chapter format- Pagnation- Identification- Using quotations- Presenting footnotes – abbreviations- Presentation of tables and figures- Referencing- Documentation-Use and format of appendices- Indexing - Bibliography, Appendices

References:

1. Gopal, M.H (1970) An Introduction to Research Procedures in Social Sciences, Bombay, Asia Publishing House.
2. Goode J.Willium & Hatt K. Paul, Methods of social Research, New York, McGraw –Hill.
3. Kothari, C.R (2004) Research Methodology: An Introduction, Delhi, New Age
4. Krishnaswami, O.R &, M.Ranganatham (2011) Methodology of Research in Social Sciences, Himalaya Publishing House, Mumbai. .(Unit 1,2, 3,4)
5. Kumar, Renjith (2009) Research Methodology: A Step by Step Guide for Research, Delhi, Pearson Education
6. P.Saravanavel ((1987) Research Methodology, Kitab Mahal, Allahabad .(Unit 1,2, 3,4)
7. Gupta S P tatistical Methods Sultan Chand and Sons, New Delhi. .(Unit 3,4,)
8. Gupta S.C, Fundamentals of Statistics, Himalaya Publication House, Bombay. (Unit 4,)9. Rajaram V. (1996), Fundamentals of computers, Prentice Hall of India, New Delhi

ECONOMICS OF AGRICULTURE AND COOPERATION: PAPER X

SEMESTER V

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - II	ELECTIVE PAPERS		
ECOEA504	ECONOMICS OF AGRICULTURE AND COOPERATION: PAPER X	4	100

Module 1: Agricultural Productivity

(12 lectures)

Role of agriculture in economic development - Cropping Pattern Agricultural Productivity, Causes of Low Productivity in Agriculture - Measures taken to improve the Agricultural Productivity in India - Water Management and agricultural development - Agricultural labour: Problems and suggestions.

Module 2: Agricultural Credit

(12 lectures)

Institutional and Non-Institutional Sources of Credit - Co-operative Credit and Agriculture, Rural Indebtedness - Commercial Banks and Regional Rural Banks, micro finance - NABARD - Role and Performance.

Module 3: Agricultural Marketing

(12 lectures)

Types of Marketing - Corporate, Commodity and Global Problems and Measures of Agricultural Marketing - WTO and Indian Agriculture. Problems of Agricultural Marketing and its measures.

Module 4: Agricultural Price and Policy

(12 lectures)

New Agricultural Policy – 2007 - Food Security in India - Price Policy of CACP Evaluation, Agricultural Crisis and Farmers' Suicide. Agro-Tourism and its policy

References:

1. Carl Eicher and Lawrence wit (1964), Agriculture in Economic Development McGraw Hill Book Company, New York
2. Bilgram, S.A.R,(1966), Agricultural Economics, Himalaya Publication House, Delhi.
3. Ghatak S. and K. Ingerscent, (1964), Agriculture and Economic Development, Select Books, New Delhi
4. Raj K.N. (1988) Essays in Commercialization of Indian Agriculture, Oxford University Press, New Delhi
5. Thamarajalaxmi R. (1994), Intersectoral Relationship in Developing Economy, Academic Foundation, Delhi
6. Papola T.S. (1982), Rural Industrilization in India, Himalaya Publication House, Delhi.
7. Sadhu A.N. & Singh Amarjit (1966):” Fundamentals of Agricultural Economics, Himalaya Publication House, Delhi.

8. Soni R.N.(1955), Leading Issues in Agricultural Economics, Arihant Press, Jalandhar
9. Wanmali S. and C. Ramasamy (Ed.)(1995), Developing Rural Infrastructure, McMillan, New Delhi
10. Govt. of India, (1976), Report of National Commission on Agriculture, New Delhi
11. Memoria C. B. (), Agricultural Problems of India
12. Lekhi R.K. (), Agricultural Problems in India
13. Datt and Sundaram (2012), Indian Economy, S.Chand & Company, New Delhi
14. Mishra & Puri, (2012), Indian Economy, Himalaya Publishing House, New Delhi
15. Vaidhanathan, A. (1995), Indian Economy: Crisis, Response and Prospects, Orient Longmans, New Delhi.
16. John W. Penson, Oral Capps, C.Parr Rosson, (1999), Introduction to Agricultural Economics, Prentice Hall, New Jersey.
17. Agrawal A.N. & Kundan K.L. Agricultural Problems of India, Vikas Publication House, New Delhi
18. Khusro A.M. (1968) Leading issues in Agricultural Development, Allied Publishers, Bombay.

ECONOMICS OF AGRICULTURE AND COOPERATION: PAPER XVI

SEMESTER VI

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - II	ELECTIVE PAPERS		
ECOEACD604	ECONOMICS OF AGRICULTURE AND COOPERATION: PAPER XVI	4	100

Module 1: Co-operation

(12 lectures)

Meaning, features of Co-operation - Principles of Co-operation (Manchester-1995) – Role of Co-operation in Economic development - Globalization and Co-operation-Importance and Benefits of Co-operation.

Module 2: Co-operative Finance in India

(12 lectures)

Co-Operative Finance: Need, Structure, Progress and Problems - National Co-operative Development Corporation (N.C.D.C.) - Farmers service societies and urban Co-operative banks.

Module 3: Agricultural Co-operatives

(12 lectures)

Role and Types of Agro-Industries - Problems and Measures of Agro-Industries – Sugar and Dairy Co-operatives - Food and Fruits Processing Industry - Co-Operative Farming.

Module 4: Co-operative Organizations in India

(12 lectures)

Consumer Co-operatives - Co-Operative Marketing - Housing Co-operative societies - Labour Co-operative societies - Agricultural Marketing societies-Leadership in Cooperative development.

References:

1. R. D. Bedi () Theory, History and Practice of Co-Operation, Loyal Book Depot, Meerut (U.P.)
2. Mathur B. S, () Co-Operation in India, Sahitya Bhavan, Agra
3. John Matthai, () Agricultural Co-Operation in India , Reliance Publishing House, New Delhi
4. Krishnaswami,() Fundamentals of Co-Operation, S. Chand and Company Ltd, New Delhi
5. Hajela T.N, () principles, problem and practice of Co-operation, Agarwal publication.
6. Government of Maharashtra - Co-operative movement at a Glance (latest annual report).

INTRODUCTION TO ECONOMETRICS: PAPER XI**Preamble:**

The objective of this course is to impart a basic understanding of econometrics. The student will be able to appreciate the theoretical basis of the subject. At the same time, it will enhance the student's ability to apply the theoretical techniques to the problems of the real world. Topics like forecasting have been introduced to impart this practical orientation.

SEMESTER V

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - II	ELECTIVE PAPERS		
ECOITEA505	INTRODUCTION TO ECONOMETRICS: PAPER XI	4	100

Module 1: Idea of a random variable

(10 Lectures)

- Concept of a random variable: Discrete and continuous
- Expected values of a random variable
- Variance of a random variable
- Discrete random variables: Bernoulli, Binomial, Poisson
- Continuous random variables: The normal distribution

Module 2: Jointly distributed Random variables

(10 Lectures)

- Joint and marginal distributions for bivariate random variables
- Conditional probability
- Conditional mean and variance
- Covariance
- Correlation and Partial correlation
- Central limit theorem (without proof)

Module 3: Statistical Inference

(12 Lectures)

- Point and interval estimation
- The Z distribution
- The Null and Alternate hypotheses and significance testing for mean using Z distribution when population variance is known
- The chi-square distribution and testing for sample variance with known population variance
- The F distribution and comparing sample variances
- The t distribution and hypothesis tests when population variance is unknown.

Module 4: Regression Analysis

(13 Lectures)

- Two variable regression model
- The concept of the PRF
- Classical assumptions of regression
- Derivation of the OLS estimators and their variance
- Properties of OLS estimators under classical assumptions, Gauss-Markov Theorem (without proof)

- Tests of Hypothesis, confidence intervals for OLS estimators
- Measures of goodness of fit: R square and its limitations, adjusted R square and its Limitations.

INTRODUCTION TO ECONOMETRICS: PAPER XVII

SEMESTER VI

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - II	ELECTIVE PAPERS		
ECOITEA605	INTRODUCTION TO ECONOMETRICS: PAPER XVII	4	100

Module 1: Econometric Model Specification

(10 Lectures)

- Identification: Structural and reduced form
- Omitted Variables Bias
- Errors in measurement
- Endogeneity and Bias

Module 2: Failure of Classical Assumptions

(10 Lectures)

- Multi-collinearity and its implications
- Auto-correlation: Consequences and Durbin-Watson test
- Heteroskedasticity: Consequences and the Goldfeld -Quandt test

Module 3: Forecasting

(13 Lectures)

- Forecasting with a) moving averages b) linear trend c) exponential trend- CAGR
- Forecasting with linear regression
- Classical time series decomposition
- Measures of forecast performance: Mean Square Error and Root Mean Square Error
- Limitations of econometric forecasts

Module 4: Linear Programming

(12 Lectures)

- Linear programming
- Dual of a linear programming problem

- Simplex method
- Transportation

References:

1. Gujarati Damodar, Basic Econometrics.
2. Hatekar Neeraj (2009), Econometrics: The First Principles A Friendly Introduction.
3. Kapoor V. k. (2011), Operations Research Problems & Solutions, Sultan Chand & sons.
4. Lipschutz (Schaum Series), Theory and Problems of Statistics.

ENVIRONMENTAL ECONOMICS: PAPER XI

Preamble:

This course focusses on economic causes of environmental problems. In particular, economic principles are applied to environmental questions and their management. Economic implications of environmental policy are addressed as well as valuation of environmental improvements.

SEMESTER V

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - II	ELECTIVE PAPERS		
ECOENVEB505	ENVIRONMENTAL ECONOMICS: PAPER XI	4	100

Module 1: Introduction to Environmental Economics

What is environmental economics, review of microeconomics and welfare economics, Pareto optimality and market failure in the presence of externalities; property rights and Coase theorem

Module 2: The design and implementation of Environmental Policy

Overview-Criteria for evaluating environmental policies; Standards, Pigovian taxes and effluent fees, tradable permits, choice between taxes and quotas, implementation of environmental policy

Module 3: Measuring benefits of environmental improvements

Economic value of Environment- Use and Non-use values-Measurement method:-market based and non-market based methods, contingent valuation, travel cost method, hedonic price method, risk assessment and perceptions

Module 4: Environmental problems

The global environment- Trans-boundary environmental problems, economics of climate change, International environmental Agreements - , sustainable development: Concepts and measures

References:

1. Barry C. Fields (1997) : Environmental Economics : An Introduction, McGraw Hill International Edition
2. Charles Kolstad (2000): Environmental Economics, Oxford University Press, New York.

DEVELOPMENT THEORY AND EXPERIENCE: PAPER XVII

Preamble:

This is the second paper of economic development sequence. The course begins with demographic concepts and their evolution during the process of development. Then it focuses on the theory migration and discusses the link between migration and development. The structure of markets and contracts is linked to the particular problems of enforcement experienced in poor countries. The course ends with the issues related to environment and development.

SEMESTER VI

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - II	ELECTIVE PAPERS		
ECOPUEB605	DEVELOPMENT THEORY AND EXPERIENCE: PAPER XVII	4	100

Module I: Demography and Development

Demographic concepts; birth and death rates, age structure, fertility and mortality; demographic transitions during the process of development; gender bias in preferences and outcomes and evidence on unequal treatment within households; connections between income, mortality, fertility choices and human capital accumulation.

Module II: Structural Transformation

The Lewis model –Clark-Fisher model of structural change , Urbanization: Trends and Projections with reference to India, Urbanization and Development, Causes of urbanization, Urban informal sector, Policies for the urban informal sector, Migration and development, Economic theory of rural-urban migration: Harris-Todaro migration model

Module III: Land, Labor and Credit Markets

Role of Agriculture in Economic Development, Market Failure and Agriculture, The distribution of land ownership; Land reform and its effects on productivity; contractual relationships between tenants and landlords; Land Acquisition; Nutrition and Labor Productivity; Rural Credit Market; Microfinance; Inter-linkages between Rural Factor Markets.

Module IV: The Environment and Development

The core of environmental problems-Rural poverty and environmental destruction-industrialization and environmental pollution-Economic models of environmental issues: privately owned resources, common property resources, public goods and bads: regional environmental degradation and the free rider problem, limitations of public good framework.

References:

1. Debraj Ray, *Development Economics*, Oxford University Press, 2009.
2. Partha Dasgupta, *Economics: A Very Short Introduction*, Oxford University Press, 2007.
3. Abhijit Banerjee, Roland Benabou and Dilip Mookerjee, *Understanding Poverty*, Oxford University Press, 2006.
4. Kaushik Basu, 2012, editor, *The New Oxford Companion to Economics in India*, Oxford University Press.
5. Amartya Sen, *Development as Freedom*, Oxford University Press, 2000.

6. Daron Acemoglu and James Robinson, *Economic Origins of Dictatorship and Democracy*, Cambridge University Press, 2006.
7. Robert Putnam, *Making Democracy Work: Civic Traditions in Modern Italy*, Princeton University Press, 1994.
8. Michael Todaro and Stephen Smith : *Economic Development*, 11th edition, Pearson

POLITICAL ECONOMY OF GLOBALISATION: PAPER XVII

Preamble:

This course explores changes in the organisation of production, labour market institutions and corporate structure. It goes on to study the consequences of globalization, especially of financial flows, for the role of the state, economic performance, gender issues, environment, human welfare and development.

SEMESTER VI

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - II	ELECTIVE PAPERS		
ECOPEG605	POLITICAL ECONOMY OF GLOBALISATION: PAPER XVII	4	100

Module 1: Changing Dynamics of Capitalist Production, Organisational Form and Labour Process

Perspective on political economy with a historical overview: capitalist development in the pre-second world war period, the 'golden age' and later, Fordist and post-fordist production; changing dynamics of organisation of production, markets and labour process; the changing nature of job security and labour rights.

Module 2: The State in the Era of Globalisation: Welfare, Development and Autonomy

Globalisation and the limits of the welfare state, development and state autonomy.

Module 3: The Changing Role of Finance

The changing role of finance in capital accumulation and corporate structure; finance and globalisation - financialisation, financial liberalisation and financial crisis.

Module 4: The Social Dimensions

Globalisation and uneven development – growth, inequality and exclusion, Gender in work, accumulation and globalisation; issues in environment and sustainability; alternatives ahead.

References:

1. Michel Beaud, *A History of Capitalism, 1500-2000*, trans. by Tom Dickman and Anny Lefebvre, New York: Monthly Review Press, 2001.
2. Ash Amin (ed.), *Post-Fordism: A Reader*, Blackwell, 1994.
3. Fran Tonkiss, *Contemporary Economic Sociology: Globalisation, Production, Inequality*, Chapter 4 (Fordism and After), Routledge India 2008 reprint, 2006.
4. S. Hymer, 1975, "The Multinational Corporation and the Law of Uneven Development", in H. Radice (ed.) *International Firms and Modern Imperialism*, Penguin Books.
5. G. Gereffi, J. Humphrey and T. Sturgeon, 2005, "The Governance of Global Value Chains", *Review of International Political Economy*, Volume 12, pp. 78–104.
6. Narasimha Reddy, 2003, "Economic Globalisation, Past and Present – The Challenges to Labour" in Jomo K.S. & Khoo Khay Jin (ed.) *Globalization and Its Discontents, Revisited*, Sepsis -Tulika Books.
7. David Harvey, *A Brief History of Neoliberalism*, Oxford University Press, 2005.
8. Andrew Glyn, 2006, "Challenges to Capital", in *Capitalism Unleashed: Finance, Globalization and Welfare*, Oxford: Oxford University Press, (Ch. One, pp. 1-24).
9. G Duménil and D Levy, *The Crisis of Neoliberalism*, Harvard University Press, 2011.
10. K.S. Jomo (ed.), *The Long Twentieth Century: The Great Divergence: Hegemony, Uneven Development and Global Inequality*, Oxford University Press, 2006.
11. Gary Dymnsky, 2005, "Financial Globalization, Social Exclusion and Financial Crisis",
12. *International Review of Applied Economics*, Vol. 19, pp. 439–457.
13. E. Stockhammer, 2010, "Financialization and the Global Economy", in G. Epstein and
14. M.H. Wolfson (ed.) *The Political Economy of Financial Crises*, Oxford University Press. [Also in Working Paper Series, No. 240, Political Economy Research Institute, University of Massachusetts Amherst]
15. J.P. Smith and M.P. Ward, 1989, "Women in the Labour Market and in the Family",

16. Journal of Economic Perspectives, Volume 3, pp. 9-23.
17. Marilyn Power, 2004, "Social Provisioning as a Starting Point for Feminist Economics",
18. Feminist Economics, Volume 10, pp. 3-19.
19. John Bellamy Foster, Ecology against Capitalism, Monthly Review Press, 2002.

PROJECT: PAPER XII

SEMESTER V

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - II	ELECTIVE PAPERS		
ECOPROA506	PROJECT: PAPER XII	3	100

PROJECT: PAPER XVIII

SEMESTER VI

COURSE CODE	PAPER TITLE	CREDITS	MARKS
GROUP - II	ELECTIVE PAPERS		
ECOPROA606	PROJECT: PAPER XVIII	3	100