Advanced Econometrics Course No: ECO17304DCE

Unit I: Dynamic Econometric Models and Panel Data Models

Autoregressive and distributed lag models- Koyak model; Partial adjustment model; adaptive expectations; Almon approach to distributed-lag models; Instrumental Variable Approach; Panel data- Balanced and unbalanced panel; Methods of Estimation: Fixed effects model and Random effect model.

Unit II: Simultaneous Equations Models

Simultaneous equations models- Introduction and examples; The simultaneous equation bias and inconsistency of OLS estimators; The identification problem; Rules of identification- order and rank conditions; Methods of estimating simultaneous equation system.

Unit III: Time Series Analysis

Stochastic Difference equations; Stationarity; Unit roots, Co-integration-spurious regression; Dickey-Fuller test; Engle-Granger test; Random walk model; Error correction mechanism; Casuality test; Granger and Sim's tests; Forecasting with ARIMA modeling; Box-Jenkings methodology; Vector auto-correlation; Problems with VAR modelling – Applications.

Unit IV: Software Application.

This is an applied course in data analysis anchored on the theory and method of regression. Since the emphasis is on application of methods, this course requires understanding of econometric software and computing skills. The aim of the course is to provide the students with the theoretical tools and practical experience necessary to do applied econometric research and as such the lecture sessions will include a number of illustrations of empirical econometric studies and their possible estimation using the same data sets in workshop sessions. Students will apply the techniques learned in this course using **Stata/E-views/R**.

Basic Reading List:

- 1. Gujarati, D. N. (2009), Basic Econometrics, McGraw Hill, New Delhi.
- 2. Wooldrige, J. (2012), Introductory Econometrics: A modern approach, Cengage Learning
- 3. Johnston, J. (2015), Econometric Methods, Tata McGraw Hill, New Delhi
- 4. Kennedy P. (1998), A Guide to Econometrics, MIT Press, New York
- 5. Goldberger, A. S. (1998), Introductive Econometrics, Harvard University Press, Cambridge, Mass.
- 6. Maddala, G. S. (1993), Econometric Methods and Applications, Edward Elgar Publishing ltd. U. K.
- 7. STATA Manual, (2016), STATA Press.

Economics of Conflict

Course Code: ECO17305DCE

Unit I: Theoretical foundations

Definition Scope and Methodology of Conflict Economics; Production Possibilities and the Guns versus Butter Trade-Off - Production Possibilities Model; Rational Choice and Equilibrium – General; Fundamentals of Game Theory; Extensive and Normal Forms - Solutions and Equilibriums; Chicken and Prisoner's Dilemma Games; Repeated Prisoner's Dilemma.

Unit II: Anatomy of Conflicts

Political economy of conflict; Economic agendas in armed conflict; Greed and Grievance – The Collier-Hoeffler Model on Civil War Onset; A Bargaining Model of Conflict - Elements of Conflict; Sources of Violent Conflict; A Rational Choice Model of Terrorism; Game Theoretic Perspectives of Terrorism.

Unit III: Armed conflict and developing countries

The extent, nature and causes and costs of armed conflict in developing countries; Estimating the costs of wa – the economists' approach; Stewart's model of costs of war – Analytical framework and application; Economic reconstruction and recovery - Government versus the market in recovery; Major economic recovery tasks; The peace dividend; Key issues in economic recovery; Structural adjustment and stabilization programmes.

Unit IV: Conflict and Economic Welfare - The Kashmir Case

The Kashmir Conflict – Genesis and major developments since 1947; the conflict – economy linkages; Macro and Micro effects of Kashmir conflict; armed conflict and tourist Preferences; Militarization and land grabs.

Basic Reading List:

- 1. Anderton, C. H. & J. R. Carter (2009), Principles of Conflict Economics, A Primer for Social Scientists, Cambridge University Press.
- 2. Harris, G. (1999), Recovery from Armed Conflict in Developing Countries, Routledge.
- 3. Bose S. (2003), Kashmir Roots of Conflict, Paths to Peace, Harvard University Press Cambridge, Massachusetts.
- 4. Thorner A. (1949), The Kashmir Conflict, Middle East Journal, Vol. 3, No. 1.
- 5. Darzi, T. A and J. I. Khan, (2013), Unrest and Tourist Preferences: With special reference to Tourism Industry in Kashmir Valley, SAJTH, July 2013, Vol. 6, No. 2.

SEMESTER - III J & K Econo my

Course No: ECO17306DCE

UNIT1: Introduction

Main Features of Jammu & Kashmir Economy; Political Economy of development and governance; New Kashmir Manifesto - 1944; Agrarian transition and restructuring; Decentralized planning and administration in J&K.

UNIT 2: Jammu & Kashmir - Macro Economic Scenario

Behaviour of SGDP and Per Capita SGDP since 1950; Sectoral Composition of SGDP-Inter Temporal Changes and their Implications; Poverty, Inequality and unemployment in the State- Magnitude Dimensions and implications; Issue of fragility and economic uncertainty.

Unit 3: Agriculture

Agriculture and its development since 1947; Diversification issues in agriculture; Structural transformation and state of agriculture; Situating J&K agriculture in North Indian states; Horticulture Sectors in J&K-Development and Potential.

Unit 4: Industry and services

Industrial Sector in the State - Scope, Issues and Policies; Appraisal of PSU's in Jammu and Kashmir; Role of Private sector in Industrial development; Tourism-Tourism potential in Jammu, Kashmir and Ladakh regions; In-flow after 2010; Revenue and Developmental Initiatives; Sustainability issues in tourism; Cross LOC trade.

Basic Reading List:

- 1. Yasmin E. and Javaid Iqbal (2017), Perspectives on Jammu and Kashmir Economy. Bookwell, New Delhi.
- 2. DES, Digest of Economics and Statistics, latest issue, Government of J&K, Srinagar.
- 3. Godbholey Committee Report on Economic Reforms for J&K(1998), Government of J&K, Srinagar.
- 4. Bhat, M. S. & M. L. Misri (1994), Poverty Planning and Economic Change in J&K, Vikas Publishing House, New Delhi
- 5. Bakshi, S. R. (2002), History of Economic Development in Kashmir, Gulshan Publishers Srinagar.
- 6. Khan J. I. (2012), Jammu and Kashmir Economy, The Directorate of Distance Education, University of Kashmir.

Gender and Development Course No: Eco17307DCE

Unit I: Introduction

Gender — Conceptual and theoretical Framework; Gender stereotyping in Work-Undervaluation of women's work; Gender discrimination—Role of culture and Religion; Gender perspectives of development; Measures of development-GDI and GEM; Feminisation of Economy; Feminisation of poverty; Role of women in Economic development.

Unit II: Women and Labour

Concept of women's work; Valuation of productive and non productive work; Visible and invisible work; paid and unpaid work economically productive and socially productive work; Gender sensitive national Income estimation; Women in labour market; Factors affecting female entry in labour market; Gender and wage differentials.

Unit III: Women's access to resources

Women Work and Decision Making; Female work- participation rate and their Economic status in developing countries; Impact of technological development and modernization on women's work participation in various sectors; Factors affecting decision making by women; Property rights, access to and control over economic resources; Assets power of decision making at household and community level.

Unit IV: Gender Development policy in India

Gender Development Policy in India; Mainstreaming gender into development policies; Gender sensitive governance; Paradigm shifts from women's well being to women's empowerment; Democratic decentralization (Panchayats) and women's empowerment in India; National commission of women; Committee on the Elimination of discrimination Against Women (CEDAW); National policy for the empowerment of women (2001); Gender budgeting.

Basic Reading List:

- 1. Raka, R. (2012), Handbook of Gender, Oxford University Press.
- 2. Pal, B. and B. Vasular (2011), Gender and Discrimination (Health, Nutritional status and Role of Women in India, Oxford University Press.
- 3. Agarwal, B. (2010), Gender and Green Governance: "The Political Economy of Women's Presence within and Beyond Community Forestry, Oxford University Press.
- 4. Kochhar, K., S. Das and N. Kumar and S. J. Chandra, (2015), Women Workers in India: Why so few among few, IMF Working Paper, Asia and Pacific Department.
- 5. Huyers, (2016), Closing the Gender Gap in Agriculture, Gender Technology and Development, Sage Journal, Volume 20 (2).
- 6. Twelfth Five Year Plan 2012-17, Planning Commission, Government of India.

Indian Financial System

Course No: ECO17406DCE

Unit I: Introduction

Indian Financial System—An overview; Macroeconomic dimensions of financial system; Major issues in Indian financial system; Financial Sector Reforms in India—a review; Basel Reforms—implication for Indian Banking.

Unit II: Financial Markets

Structure, Functions and Organizations; Money Market – Features, Instruments and limitations; Capital Market – instruments and importance; Un-regulated credit markets—types, functions and limitations.

Unit III: Financial Intermediaries

Financial Intermediaries – Structure, functions and importance; Banking financial intermediaries- types; Commercial banking — liabilities and asset management; RBI's monetary policy and credit controls; Non–Banking Financial intermediaries – types; Development banking--structure and functions.

Unit IV: Stock Exchange and its Regulations

Stock Exchange – Importance and methods of trading; Organization and working of-OTCEI, National Stock Exchange, Bombay Stock Exchange; SEBI – Working and Functions; Recent Regulation.

Basic Reading List:

- 1. Khan, M. Y. (2015), Indian Financial System, Tata McGraw Hill, New Delhi.
- 2. Bhole, L. M. (2009). Financial Institutions and Markets, Tata McGraw Hill Company New Delhi
- 3. Bhasin, N. (2009), Monetary Banking and Financial Developments in India, New Century Publicaions New Delhi
- 4. Gordon E. and K Natrajan,(2009), Financial Markets and Institutions, Himalayan Publishing House, New Delhi
- 5. Machiraju, M. R. (1999), Indian Financial System, Vikas Publishing House, New Delhi.
- 6. Surry, M. M. (2004), Indian Economy in 21st Century, Tax Foundation of India, New Delhi.
- 7. Reddy, Y. V. (2001), Monetary and Financial Sector Reforms in India, UBS Publishers and Distributors Ltd., New Delhi.

Project Work

Course code: ECO17407DCE

Project Work shall be Discipline Centric to be carried out under the supervision of concerned teacher of the department. The project work shall be submitted in the form of a typed dissertation limited to a maximum of 100 pages. The report will be evaluated by one internal and one external examiner followed by presentation of the work and viva voce. The project report will carry 100 marks (04 credit) comprising 75 marks (03 credit) for dissertation and 25 marks (01 credit) for presentation and viva voce examination.

International Finance

Course No: ECO17404DCE

Unit I: Foreign Exchange Markets

Structure and functions of foreign exchange markets; Exchange rate determination; Foreign exchange transactions; Forward exchange market; Hedging, speculation and arbitrage; Theories of Exchange rate determination – Purchasing power parity theory; Asset market approach.

Unit II: BOP Adjustments Mechanism

Balance of Payments; Adjustment under flexible and fixed exchange rate system—price and income adjustments; Monetary approach to balance of payments; Devaluation—elasticity and absorption approaches.

Unit III: International Monetary System

Types of International monetary system; Evolution, operation and collapse of Bretton Woods system; International Monetary Fund (IMF); International Bank for Reconstruction and Development (IBRD); Fixed and flexible exchange rate system; Euro currency markets; Euro bond market.

Unit IV: International Financial Crisis

International Debt crisis; International Financial Derivative; Currency crisis—concept and characteristics; First, Second and Third generation models of currency crises; Recent Financial Crises- Causes and consequences.

Basic Reading List:

- 1. Soderston, B. and G. Reed (1999), International Economics, McMillan Press Ltd., London.
- 2. Krugman, P. R. and M. Obstfeild (2012), International Economics- Theory and Policy, Addison Wesley, New Delhi.
- 3. Salvatore, D. (2011), International Economics, Wiley India, New Delhi.
- 4. Carbaugh, R. J, (2008), International Economics, Cengage Learning, New Delhi
- 5. Marrewijk, C. V. (2007), International Economics: Theory, Application and Policy, Oxford University Press, New York.
- 6. Chacholieds, M. (1999), International Economics, Macmillan Publication.
- 7. Kindleberger, C. P. (1978), International Economics, R. D. Irwin Inc., Illinois.

Issues in Indian Economy

Course No: ECO17405DCE

Unit 1: Agriculture

Agricultural policy-costs and prices; Agricultural prices and PDS; Impact of public expenditure on agricultural growth; Agricultural taxation—a debate; Sustainability of agriculture and food security in India; Land acquisition.

Unit 2: Industry and trade

Structure and composition of Industry – issues of concentration; large vs small industry; Industrial location; Small scale reservation policy; Trends and patterns of industrial growth; Foreign trade regime; protection and foreign competition; Productivity; Import substitution versus export; Competitiveness; Effect on export competitiveness.

Unit 3: Poverty, Inequality and Inflation

Poverty and exclusion; NREGA; Social security for unorganized sector; Unemployment—types, causes and consequences; Population pressure—economic effects; Inequality—extent, consequences and remedies; Regional imbalance—extent, consequences and remedies; Parallel economy in India—Demonetisation.

Unit 4: Infrastructure and Development

State of infrastructure – reforms, restructuring, pricing and regulation; Promoting investment in infrastructure – public and private partnership; Sectoral Issues – energy, transport, telecom and urban infrastructure; Human development indicators – review of change since early fifties, wide regional variations; Environmental protection – Sustainable Development Goals.

Basic Reading List:

- 1. Pulin, N. (2015), Economic Development of India (Critical Concepts in Economics), London & New York, Routledge.
- 2. Panagariya, A. (2008), India: The Emerging Giant, Oxford University Press.
- 3. Krueger, A. (2003), Economic Policy Reforms and the Indian Economy, Oxford University Press.
- 4. Dandekar, V.M. (2004), The Indian Economy 1947-97; transforming traditional Agriculture Vol. I
- 5. Kurian, C.T. (1978), Poverty Planning and Social Transformations-An Alternative in Development Planning, Allied Publishers, New Delhi.

Statistical Methods

Course code: ECO17104DCE

Unit I: Probability and Distribution

Meaning and definition of Probability; Probability Rules; Addition Rule; Multiplication Rule; Bay's theorem; Conditional probability; 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, Chi-square distribution.

Unit II: Theory of Sampling

Data collection-Primary and Secondary sources; Methods of collecting primary data; Sampling -Types; Small and large samples - Properties and Comparison, Sampling distribution; Central limit theorem; Designing a Household Sample survey.

Unit III: Hypothesis Testing

Testing of hypothesis- Level of significance and Level of confidence, Confidence limits and Critical Region; Tests of significance- Type I and II errors; Goodness of fit; One tailed and two tailed tests; Hypothesis testing based on Z test, t tests, Chi-square and F tests.

Unit IV: Correlation Regression and Economic Forecasting

Correlation—meaning and scope; Karl Pearson's Coefficient of Correlation; rank Correlation; Partial and Multiple Correlation; Regression-Meaning and Scope; Simple and Multiple Regression; Forecasting; Nature and decomposition of a time series.

Basic Reading List:

- 1. Barrow, M. (2006), Statistics for Economics, Accounting and Business Studies, Prentice Hall.
- 2. Gupta, S. C. (2011), Fundamentals of Statistics, Himalayan Publishing House, New Delhi.
- 3. Gupta, S. P. (2012), Statistical Methods, Himalayan Publishing House, New Delhi.
- 4. Floyd, J. E. (2010), Statistics for Economists: A Beginning,, University of Toronto.
- 5. Hogg, R.V. and A.T. Craig Hogg, (1970), Introduction to Mathematical Statistics, Macmillan Publishing Co., New York.
- 6. Hogg, R.V. and E.A. Tanis, (1993), Probability and Statistical Inference, Macmillan Publishing Company, New York.
- 7. Clarke, G. M. and D. Cooke, (1992), A Basic Course in Statistics, Arnold Publishing House.

Financial Institutions and Markets

Course code: ECO17105DCE

Unit I: Nature and Role of Financial System

Financial System-Structure; Financial System and economic development—from financial neutrality to financial activism; from financial volatility to financial stability; Role of Government in financial Development; Theories of the impact of Financial Development on Savings and Investment—Prior Saving Theory; Financial Regulation theory; Financial Liberalization theory.

Unit II: Financial Markets

Classification of Financial Markets - Functions of Financial Markets; Instruments of developed money and capital markets; Characteristics of Financial Instruments; Derivatives Markets-types.

Unit III: Financial Intermediaries and Central Bank

Financial Intermediaries – Classification, Role and Functions ; Central Banking—Evolution, Role and Functions; Monetary policy—Goals, Tools, Targets and Limitations.

Unit 1V: Financial Instruments and Services

Mutual Funds - Evolution and Types; Classification of financial services - Merchant banking, Underwriting, Credit Rating, Venture Capital, Factoring, ADRs and GDRs.

Basic Reading List:

- 1. Miskin, F. (2015) The Economics of Money: Banking and Financial Markets, Addison Wesley Longmate, New York.
- 2. Bhole, L. M. (2009), Financial Institutions and Markets, Tata McGraw Hill, New Delhi.
- 3. Hubbard, G. R. (1997), Money, the Financial System and Economy, Addison Wesley, New York.
- 4. Gupta, S. B. (2001), Monetary Economics, S. Chand and Co. Ltd, New Delhi.
- 5. Bhasin, N. (2009), Monetary Banking and Financial Developments in India, New Century Publications, New Delhi.

Industrial Economics

Course code: ECO17106DCE

Unit I: Firm's Behaviour

Industrial Economics- Conceptual framework and scope; Organizational pattern of firms— Private sector, Public sector, and Joint sector; Objectives of a firm; Industrial efficiency—Concept, determinants and its measurement; Profitability— Concept and its measurement.

Unit II: Market Structure

Standard Form of market structure-Conceptual Framework; Workable competition; Market concentration-concepts and its measurement; Market structure and Innovation-concept and relationship Crony Capitalism; Race to the Bottom.

Unit III: Theories of Industrial Location and Growth

Downie's theory of growth of firm; Industrial location—Determinants of Industrial location, Industrial location theories—Webers and Sergent Florence; Diversification—Meanings and objectives, Vertical Integration and Merger.

Unit IV: Investment Decisions and Industrial Financing

Nature and types of investment decisions; Methods of project evaluation— the payback method; The net present value method, Internal rate of return method; Industrial finance—Need, Types and Sources of Finance; Choice of Funding.

Basic Reading List:

- 1. Barthwal, R.R. (2010), Industrial Economics: An Introductory Textbook, (3rd ed.) New Age International. New Delhi
- 2. Ferguson, P. R. & G. J. Ferguson (1994), Industrial Economics: Issues and Perspectives, Palgrave Macmillan, New York
- 3. Kuchhal, S.C. (1989), Industrial Economy of India, Chaitanya Publishing House, Allahabad
- 4. Hay, D.D and D.I. Morries (1991), Industrial Economics Theory and Evidence, Oxford University Press.
- 5. Ferguson, P. R., H. Dodge and Anselm Haverkamp (1994), Industrial Economics: Issues and Perspectives, New York University Press.

Basic Econometrics

Course code: ECO17204DCE

Unit I: Basic Statistical Concepts

Normal distribution; Chi-sq, t and F distributions; Estimation of parameters; Properties of estimators; Interval estimation and Hypotheses testing; Tests of significance and confidence interval approach.

Unit II: Basic Regression Analysis

Nature, meaning and scope of Econometrics; Data Issues; time series, cross section and panel data; Simple and general linear regression model; Assumptions, Estimation through OLS approach; Gauss-Markov theorem; Concepts and derivation of R^2 and adjusted R^2 .

Unit III: Problems in Regression Analysis

Nature, test, consequences and remedial steps of problems of Heteroscedasticity; Multi-co-linearity and Auto-correlation; Non-normality; Problems of specification error; Errors of measurement.

Unit IV: Qualitative Variables in Regression

Dummy variable technique—Testing structural stability of regression models; Interaction effects; Seasonal analysis; Piecewise linear regression; Use of dummy variables; Regression with dummy dependent variables; The Linear Probability Model; Logit and Probit models.

Basic Reading List:

- 1. Gujarati, D.N. (2009), Basic Econometrics, McGraw Hill, New Delhi.
- 2. Wooldridge, J. (2012), Introductory Econometrics: A Modern Approach, Cengage Learning.
- 3. Johnston, J., (2015), Econometric Methods, Tata McGraw Hill, New Delhi.
- 4. Kennedy, P. (1998), A Guide to Econometrics, MIT Press, New York.
- 5. Goldberger, A. S. (1998), Introductive Econometrics, Harvard University Press, Cambridge.
- 6. Maddala, G. S. (1993), Econometric Methods and Applications, Edward Elgar Publishing Itd. U. K.

SEMESTER-II

Monetary Economics

Course code: ECO17205DCE

Unit I: Nature and Role of Money

Money and Near money; Significance of near money; Monetary standards- Gold Standard and paper standard, Value of money- measurement of value of money; Construction of Price Index Numbers; Difficulties in measuring the changes in value of Money.

Unit II: Theories of Demand for Money

Demand for money— Classical and Keynes Theories; Baumol-Tobin money demand model; Friedman's wealth theory; Neo-classical theory of money; Keynes' income theory of money.

Unit III: Supply of Money

Money supply- Approaches to the definition of money supply; components of money supply; The H theory of money supply; Money multiplier process; Determinants of money multiplier; Reserve bank's analysis of money.

Unit IV: Theories of Interest Rates

Theories of interest rate-Classical; Loanable funds, Liquidity Preference and Neo-Keynesian theory; Term structure and risk structure of interest rates; Theories of term structure of interest rates— Expectations theory, Market segmentation theory, preferred habitat theory.

Basic Reading List:

- 1. Lloyd (1979), Money Banking and Economic Activity, Addison Weslay.
- 2. Miskin F. (2015), The Economics of Money: Banking and Financial Markets, Addison Weslay Longmate.
- 3. Bhole, L. M. (2009). Financial Institutions and Markets. Tata McGraw Hill Comp New Delhi.
- 4. Gupta, S. B (2010), Monetary Economics. S. Chand and Com. Ltd. New Delhi.
- 5. Hubbard, G. R. (1997), Money, the Financial System and Economy. Addison Wesley.
- 6. Burton, M. and B. Brown (2009), The Financial System and the Economy Principles of Money and Banking, Prentice Hall of India, New Delhi.

Labour Economics

Course code: Eco 17206DCE

Unit I: Labour Market and Employment

Nature and characteristics of labour market; The classical, New-classical and dual economy labour markets; Demand for labour relating to size and pattern of investment and choice of technology; Supply of labour in relation to growth of labour force; Employment and development relationship.

Unit II: Wage Determination – Theory and Practice

Classical, Neo-classical and Bargaining theory; Various concepts of wages—minimum wages; living wages and fair wages; Problem of implementation of minimum wages; Wage determination in urban and rural sector – organized and unorganized; Wage and non-wage components and labour remuneration.

Unit III: Industrial Relations and Trade Unions

Growth of industrialization and emergence of unionism; Theories of labour movement— The Marxian View; Theory of industrial Democracy by Sidney and Beatrice Webb; Growth; structure and pattern of trade unionism in India; Achievements of trade union movement in India; Determinants of industrial disputes.

Unit IV: State and Labour

Role of state; labour matters and safety nets; labour laws— labour legislations in India, Industrial Disputes Act; Trade Union Act; Employees State Insurance Act; International labour Organisation— role and functions;

Basic Reading List:

- 1. Borjas, G. J. (2012), Labour Economics. McGraw -Hill, New York.
- 2. Pierce, C. (2015), Labour Economics, Prentice Hall India Learning Ltd
- 3. Mcconnell, C. R., S. L Brue and D.A. Machperson (2003) Contemporary Labour Economics, McGraw-Hill, New York.
- 4. Joshi, M. V. (2014), Labour Markets and Labour Economics, Atlantic Publications
- 5. Sapsford, D. (2014), Labour Market Economics, Routledge
- 6. Sharma, A. K. (2006), Labour Economics, Anmol Publication, New Delhi
- 7. EhrenBerg, R. G. and R. S. Smith (2012), Modern Labour Economics: Theory and Public Policy; Addison Wesley, NYC.
- 8. Institute of Human Development, (2014), India Labour and Employment Report: Workers in the Era of Globalization, Academic Foundation.

Agriculture Economics

Course code: Eco17207DCE

Unit I: Introduction

Nature and scope of agricultural economics; Factors affecting agricultural development— technological, institutional and general; Interdependence between agriculture and industry; terms of trade between agriculture and industry; Approaches to agricultural development— Lewis, Ranis-Fei, Mellor, Schultz.

Unit II: Agricultural Production and Productivity

Agricultural production – Resource and efficiency in traditional agriculture; Production function analysis in agriculture; Factor combination and resource substitution; Decomposition Model; Cost and supply curves; Size of farm and laws of returns – Farm budgeting and cost concepts; Supply response of individual crops and aggregate supply; Technical change and agricultural productivity.

Unit III: Demand and Supply of Farm Products

Characteristics of demand for farm products; Concept and measurement of own price; Cross Price and income elasticity's of demand and their interrelationship; Quantity and quality components of demand; Characteristics of supply of farm products; Issues relating to specification of supply response function (Distributed lags, acreage vs. production response etc.).

Unit IV: Agriculture Marketing

Agriculture Marketing – Concept and Objectives; Differences in Agricultural and Consumer Marketing; Constraints in Agricultural marketing; Agribusiness –Emerging Branches- Non Conventional forms of Agribusiness; Export potential for farm products; Supporting Services; SCM in agri-business i.e. Cold Chains; Organized procurement.

Basic Reading List:

- 1. Mellor, J.W. (1969), The Economics of Agricultural Development, Cornell University Press.
- 2. Subbarao, K. (1989), Agricultural Marketing and Credit, ICSSR.
- 3. Heady, E.O. (1961), Economics of Agricultural Production and Resource use, Prentice Hall, New York.
- 4. Penson, J. B., O. Capps and C.P Rosson, (1996), Introduction to Agricultural Economics, Prentice Hall
- 5. Debertin, D. L. (2012), Agricultural Production Economics, Macmillan Publishing Company, New York
- 6. Reddy S. S., P. R Ram, N. Sastry and B. Devi, (2006), Agricultural Economics, Oxford & IBH Publishing Co. Pvt. Ltd. New Delhi.

Economics of Social Sector Course No: ECO17107DCE

UNIT I: Introduction to Social Sector

Social sector— concept and its constituents; Social exclusion and inclusion; Social Development Index; Social Progress index-2016; Human Capital— the concept and components; Human capital versus physical capital; human capital and human development.

Unit II: Economics of Education

Meaning and scope of Economics of Education; Education as consumption and Investment goods; Cost of Education— Expenditure on education, private costs and social Costs; direct, indirect and opportunity costs; Benefits of Education— direct and indirect benefits.

Unit III: Economics of Health

Meaning and Scope of Economics of Health; Concept of medical health and health care; Health as consumption and Investment good; Role of health in economic development; health as human capital; Economic dimension of health care—demand and supply of health care; Government intervention in health care markets—economic rationale and forms.

Unit IV: Issues in Social Sector in India

Primary education—achievements and concerns; Case for compulsory and free education; Higher education in India—changing perspective; Education and earnings; growth of higher education; New education Policy 2016; Role of private sector in health care; Public sector— Health care issues; National Health Policy 2017.

Basic Reading List:

- 1. Blaugh, Mark (1972), Introduction to Economics of Education, Penguin, London.
- 2. Folland, S. (2009), The Economics of Health and Health care, Pearson Prentice Hall, New Delhi
- 3. Parikh, K. S. (ed) various issues, India Development Report, Oxford University Press, New Delhi.
- 4. Kundu, A. (2006) India Social Development Index, Oxford University Press, New Delhi.
- 5. Govinda, R. (2002) India Education Report, Oxford University Press, New Delhi.
- 6. Mishra, R (2003), India Health Report, Oxford University Press, New Delhi.

International Economics Course No: ECO17308GE

Unit I: Trade

An introduction to International trade; Theory of Absolute and Comparative advantage; Factor Endowments theory; Instruments of trade policy; cost and benefits of tariffs; Globalisation and Economic integration.

Unit II: Finance

Structure of international financial system; Balance of Payments; Foreign Exchange Market; Structure & Functions; Exchange rates; Types of foreign exchange transaction; Hedging, Speculation and Arbitrage.

Basic Reading List:

- 1. Salvatore, D. (2011), International Economics, Wiley India, New Delhi.
- 2. Carbaugh, R. J. (2008), International Economics, Cengage Learning, New Delhi.

Introduction to Economics
Course code: ECO17108GE

Unit I: General Economics I

Introduction— descriptive, economic theory and applied economics; Law of Demand and Supply; Utility- Cardinal and Ordinal measurement; Marginal Utility; Indifference Curve and Consumer's Equilibrium; National Income- Concepts and Measurement; Inflation- types, causes and consequences; Unemployment- types and causes.

Unit II: General Economics II

Growth and Development – concepts and measures; Public finance—Taxation; Expenditure and Debt; Budget analysis; International Trade— free trade vs protection, Balance of Payments; Introduction to Monetary and Fiscal policy.

Basic Reading List:

- 1. Stonier and Hague (1982), A Text book of Economic Theory, Penguine Publication.
- 2. Dwivedi, D.N. (2007), Microeconomics, Tata McGraw Hill, New Delhi.
- 3. Ahuja, H.L. (2007), Advanced Economic Theory— Microeconomic Analysis, S. Chand & Company, New Delhi.

SEMESTER-II

Industrial Organisation

Course No: ECO 17208GE

Unit-I: Introduction

Industrial economics - need and significance; Organizational structure of a firm - Objectives of firms; Theories of growth of firms; Sales and Growth maximization hypothesis; Profitability – determinants and measurement; Economics of Integration; Diversification and Mergers.

Unit-II Industrial Location and Market Structure

Theories of Industrial Location- Weber and Sergeant Florence; Market concentration-measurement; Sellers' concentration; Product differentiation; Market structure and innovation- concept and relationship; measurement of innovation; diffusion of new technology.

Basic Reading List:

- 1. Barthwal, R. R. (2010), Industrial Economics: An Introductory Textbook, New Age International, New Delhi.
- 2. Kuchhal, S. C. (1989), Industrial Economy of India, Chaitanya Publishing House, Allahabad.
- 3. Hay. D. D and D. I. Morries (1991), Industrial Economics Theory and Evidence, Oxford University Press.

SEMESTER - III Econometrics

Course code: ECO17309GE

Unit I: Basic Concepts

Nature, meaning and scope of Econometrics; Data Issues; Time series; Cross section and panel data; Simple and general linear regression; Line of Best Fit; PRF and SRF.

Unit II: Basic Regression Analysis

Assumptions of OLS; Estimation through OLS approach; Properties of Estimators; Gauss-Markov theorem; Concepts of R^2 and Adjusted R^2 ; Violations of Classical Assumptions.

Basic Reading List:

- 1. Gujarati, D.N., (2009), Basic Econometrics, McGraw Hill, New Delhi.
- 2. Wooldridge, J. (2012), Introductory Econometrics: A Modern Approach, Cengage Learning.
- 3. Kennedy, P. (1998), A Guide to Econometrics, MIT Press, New York.

Indian Economy: Features and Analysis

Course code: ECO17409GE

Unit I: Basic Features

Indian Economy—An Introduction, background, main features and geographic size; Endowment of natural resources— land, water, forest and energy with emphasis on recent policies in these areas; Population—size, composition, rural urban migration; Population policy—need and present status.

Unit II: National Income and Planning

National income and per-capita income; Sectoral and regional distribution; CSO estimates of National Income – old vs new methodology; GDP growth; Concept and evolution of Planning in India.

Basic Reading List:

- 1. Dutt, R. & K. P. M. Sundaram, (2016), Indian Economy, S. Chand & Co. New Delhi.
- 2. Misra, S. K. & V. K. Puri, Indian Economy (2016), Himalayan Publishing House, New Delhi

SEMESTER-II

Elementary Statistics

Course code: ECO-17209-GE

Unit I: Central Tendency and Dispersion

Measures of central tendency - meaning, objectives and characteristics of average;

Types of averages -arithmetic mean, median, mode and geometric mean; Measures of

Dispersion – Concept and types; range, quartile deviation; mean deviation and standard

deviation.

Unit II: Probability and Random Variable

Concept of Probability; Elements of probability theory - sample space, events,

Compound and independent events; Addition and Multiplication laws of probability;

Random variable- discrete and continuous; Binomial Distribution and Normal

Distribution.

References:

1. Barrow M. (2006), Statistics for Economics, Accounting and Business Studies, Prentice Hall.

2. Gupta S. C. (2011), Fundamentals of Statistics, Himalaya Publishing House, Mumbai.

3. Gupta S. P. (2012), Statistical Methods, Himalaya Publishing House, New Delhi.

SEMESTER - III Financial Markets

Course No: ECO173100E

Unit I: Introduction and Concepts

Financial System –Structure; Classification of Financial Markets; Instruments of developed money and capital markets; Derivatives market-concept and types.

Unit II: Stock Exchange

Stock market - evolution; Stock Exchange in India – OTCEI, National Stock Exchange; Bombay Stock Exchange; Stock Exchange Regulations- SEBI; Working and Functions.

Basic Reading List:

- 1. Miskin, F. (2015), The Economics of Money: Banking and Financial Markets, Addison Wesley Longmate, New York.
- 2. Hubbard, G. R. (2007), Money, The Financial System and Economy, Addison Wesley, New York.
- 3. Bhole, L. M. (2002), Financial Institutions and Markets, Tata McGraw Hill, New Delhi.
- 4. Gupta, S. B. (2011), Monetary Economics, S. Chand and Co. Ltd, New Delhi.
- 5. Khan, M. Y. (2009), Indian Financial System. Tata McGraw Hill, New Delhi

SEMESTER - IV
Banking and Finance in India
Course No: ECO174100E

Unit I: Banking in India

Commercial banks – Growth and regional distribution; Banking legislation –1949; Nationalization of commercial banks; Co-operative banks – Growth, Structure and Functions; Regional Rural Banks – Role and functions; NABARD, IDBI – structure, working and role.

Unit II: Indian Public Finance

Union finance – Central sources of income; Trends in revenue and expenditure; State finance – Sources of state revenue; Expenditure of state governments; Public debt since 1951; Types of Budget.

Basic Reading List:

- 1. Paul, R. R. (2015), Monetary Economics, Kalyani Publishers, New Delhi.
- 2. Mundel, S. (1999), Public Finance Policy –Issues for India. Oxford University Press New Delhi.
- 3. Lekhi, R. K. (2010), Public Finance, Kalyani Publishers, New Delhi.
- 4. Bhasin, N. (2009), Monetary Banking and Financial Developments in India, New Century Publications, New Delhi.

Elementary Microeconomics Course code: ECO171100E

Unit I: Consumer and Producer Behaviour

Introduction to Economics; concept and analysis of Demand and Supply; Elasticity of demand & supply; utility – cardinal & ordinal; Marginal utility and the law of diminishing marginal utility; Budget line; indifference curve; Consumer's equilibrium.

Unit II: Market Structure

Theory of production- production function; Law of diminishing returns; Law of Variable Proportions; Returns to scale; Production Costs – various concepts, Market - concept and Forms; Behaviour of a competitive firm; Short run and long run equilibrium.

Basic Reading List:

- 1. Dwivedi, D.N. (2007), Microeconomics, Tata McGraw Hill, New Delhi.
- 2. Ahuja, H.L. (2007), Advanced Economic Theory— Microeconomic Analysis, S. Chand & Company, New Delhi
- 3. Koutsayiannis, A. (1997), Microeconomics, McMillan Press, London

SEMESTER-II

Elementary Macro Economics

Course No: ECO172100E

Unit 1: Two sector models

Classical views on full employment; Quantity theory of money; Determination of output

and employment; Classical theory of interest rate; Keynes' criticism of classical

macroeconomic theory; Concept of aggregate supply and aggregate demand;

Determination of equilibrium level of income.

Unit 2: Inflation and business cycle

Business cycle - features, phases, causes and consequences; Stabilization policies;

Fiscal policy and direct controls; Inflation - Meaning and types; Demand pull and cost

push inflation; Causes and effects of inflation.

Basic Reading List:

1. Ahuja, H. L. (2009), Macroeconomic -Theory and Policy, S. Chand and Company Ltd. New Delhi.

2. Mithani, D. M. (2014), Macroeconomics, Himalaya Publishing House Pvt. Ltd. Mumbai.

3. Shapiro, E. (2005), Macroeconomic Analysis, Galgotia Publications, New Delhi.

Planning and Development Course code: ECO17109GE

Unit I: Introduction

Development Planning – Concept and Approaches; Market Economy – Market mechanism and development, Market failures; Rationale and practice of Planning; Government intervention in promoting development; Government Failure, Social Capital and Economic Development.

Unit II: Theory and Practice

Measuring development- HDI and MDPI; Classical approach to development: an overview; Strategies for development – Balanced vs Unbalanced; Critical minimum effort thesis and Reins- Fei Model; Economic development – Issues in Human capital formation and employment; Poverty inequality and unemployment— An experience of developing economies.

Basic Reading List:

- 1. Mishra, S.K. and V. K. Puri, (2016), Economics of Development and Planning, Himalayan Publishing House, New Delhi
- 2. Thirlwal, A.P. (2003), Growth and Development, Macmillan Press Ltd., U.K.
- 3. Todaro & Smith (2005), Economic Development, Longman, London.
- 4. Jhingan, M. L. (2006), The Economics of Development and Planning, Vrinda Publications, New Delhi.

Economics of Development Course No: ECO17301CR

Unit I: Poverty, Inequality and Development

Concept and measures of poverty; Chennery-Ahluwalia Welfare Index; Construction of poverty weighted Index of social welfare; Measurement of income inequality-Lorenz curve; properties of a desirable inequality measure; Goulet's and A.K. Sen's concept of development – capabilities approach; Concept and assessment of Development Gap.

Unit II: Theories of Development

Myrdal's theory of circular and cumulative causation; The new economic geography-Krugman's theory; Lewis' model of unlimited supply of labour; Organizational dualism and economic development (HlaMynt) – stylized framework of a developed organized and underdeveloped unorganized economy; Kremer's O-Ring theory of economic development.

Unit III: Sectoral Aspects of Development

Importance of industry and agriculture in economic development – the model of complementarities between industry and agriculture; Structure of labour markets in developing countries; Theory of Rural-Urban migration and Harris- Todaro model; Choice of techniques and appropriate technology; Choice of techniques and conflict in objectives.

Unit IV: Role of institutions and Resource Allocation

Role of market and market failure; Role of state and state failure; Role of community and community failure; Project appraisal- cost- benefit analysis; Technique of shadow pricing- little-mirrlees and UNIDO Approach.

Basic Reading List:

- 1. Thirlwal, A. P. (2014), Growth and Development, Palgrave Macmillan, U.K.
- 2. Todaro, M.P. and Smith (2013), Economic Development, Pearson Education, Delhi.
- 3. Meir, G. M. and J. E. Rauch (1997), Leading Issues in Economic Development, Oxford University Press, New York.
- 4. Sharp, A. M., C. A. Register and R. H. Leftwich (1988), Economics of Social Issues, Universal Bookstall, New Delhi.
- 5. Gills, M. Perkins, Romer and Snodgrass (1989), Economics of Development, W.W. Norton and Company, New York.
- 6. Ray, D. (2010), Development Economics, Oxford University Press, New Delhi.

Public Economics

Course No: ECO17402CR

Unit I: Fundamentals of Public Economics

Public Economics: conceptual framework; scope and schools of thought; Tools of Budget Analysis; Role of government— allocation, distribution and stabilization; Externality theory; Internalising an externality; Coase theorem.

Unit II: Public Goods

Optimal provision of Private and Public goods; Free Riders Problem; Cost Benefit analysis; Problems of allocating resources-preference revelation and aggregation; Political Economy- Lindahl Pricing; Mechanisms for aggregating Individual preferences: Arrow's Impossibility Theorem; Politico-eco-bureaucracy; Optimal Fiscal federalism and Tibeout model.

Unit III: Public Expenditure and Taxation

Public expenditure - Wagner's and Wiseman-Peacock hypothesis; Pure theory of public expenditure; Reforms in public expenditure- programme budgeting and zero-base budgeting; Taxation and types; measuring fairness of tax systems; Tax Incidence; Taxation and economic efficiency; Dead-weight loss; Theory of Optimal Taxation.

Unit IV: Fiscal Federalism in India

Concept and evolution of Fiscal Federalism; Centre-State financial relations; Sources of Revenue; Trends in Resource Transfer from Centre to State; Principles of Multi Unit Finance; Budget Deficit and Its Implications; New tax regime – GST.

Basic Reading List:

- 1. Gruber, J. (2016), Public Finance and Public Policy, MIT.
- 2. Rosen, H. (2013), Public Finance. MIT Press.
- 3. Stiglitz, J. E. (2015), Economics of Public Sector, Norton, New York.
- 4. Jha, R. (1998), Modern Public Economics, Routledge London.
- 5. Musgrave and Musgrave (2005), Public Finance in Theory and Practice, Tata McGraw Hill, New Delhi.
- 6. Atkinson, A. B. and J. E. Stiglitz, (1980); Lectures on Public Economics, Tata McGraw Hill, New York.
- 7. Cullis, J. and P. Jones (1998), Public Finance and Public Choice, Oxford University Press.
- 8. Musgrave R. A. (1959), The Theory of Public Finance, McGraw Hill, Tokyo.

Economics of Growth

Course No: ECO17401CR

Unit I: Economic Growth

Growth-conceptual and theoretical perspectives; Technical progress— embodies and disembodied; Hicks and Harrod; Learning by doing; Production function approach to the analysis of growth; Accounting for sources of growth; Classical theories of growth.

Unit II: Basic Growth Models

Harrod and Domar models; Neo-classical growth models of Solow and Meade; Cambridge growth model of Mrs. Joan Robinson and Cambridge criticism of neoclassical growth theory.

Unit III: Endogenous Growth Theory

Contribution of education to growth – Denison's and production function approach; Technology creation through R&D spending; Modelling relationship between technology creation and growth; Endogenous growth models – AK model, Romer model and two sector model of Ujawa.

Unit IV: Growth Theory: International Aspects

Trade and growth; Models of regional growth and differences- Prebisch and Seers; Dependency theory and unequal exchange; Models of export-led growth; Neoclassical supply side model; Balance of payments; constrained growth model; virtuous circle model.

Basic Reading List:

- 1. Weil, D.N. (2009), Economic Growth, Pearson Education, India.
- 2. Thirwal, A. P. (2011), Growth and Development, Palgrave Macmillan, U.K.
- 3. Barro, R. J. and Sala-i-Martin (2007), Economic Growth, Prentice Hall of India, New Delhi.
- 4. Gills, M. Perkins, Romer and Snodgrass, (2009), Economics of Development, W.W. Norton and Company, New York.
- 5. Todaro M.P. and Smith (2009), Economic Development, Pearson Education, Delhi.

Mathematics for Economics Course code: ECO17103CR

Unit I: Basic Concepts

Set Theory- Sets and set operations, Cartesian product of sets; Relations; Functions; one-to-one and onto functions— demand and supply functions; objective functions, Composite functions, Inverse functions and Binary operations; Logarithm and Exponents.

Unit II: Differentiation

Limit; Continuity and Differentiability of a function; Differentiation-Partial and Total differentials; Maxima and Minima; Derivatives of Implicit functions; Higher Order Differentiation; Euler's theorem; Uses of Differentiation in Economics; Applications of Differentiation; Constrained Optimization; Langragian Multiplier; Total revenue; total cost and product Curves.

Unit III: Integration

Integration- Concept and Fundamental Theorems; Indefinite and Definite Integrals; Economic Application of Integrals-Consumer's Surplus, Producer's Surplus, Investment and Capital formation.

Unit IV: Matrix Algebra

Matrices – Types and Operations; Determinants; Transpose; Ad-joint and Inverse of a matrix; Rank of a matrix; Cramer's rule; Matrix inversion method; Jacobian and Hessain Rule; Simultaneous Equations

Basic Reading List:

- 1. Chiang, A.C, (1984), Fundamental Methods of Mathematical Economics, Tata McGraw Hill,
- 2. Allen, R. G. D, (2003), Mathematical Analysis for Economists, The Macmillan Press, New Delhi.
- 3. Henderson, M. J., (2006), Microeconomics Theory, Tata McGraw-Hill, New Delhi.
- 4. Yamane, T., (1995), Mathematics for Economists, Prentice Hall of India, New Delhi.
- **5.** Gupta, S. C. and V. K. Kapoor (2014), Fundamentals of Mathematical Statistics, Himalaya publishing House, New Delhi.

SEMESTER – II Macroeconomic II

Course No: ECO17202CR

Unit I: Neo-classical and Keynesian models of income determination

Keynesian IS-LM model; Neoclassical IS-LM model; factors determining the slope and shifts in IS and LM functions; Comparative static analysis in Keynesian and Neoclassical model; monetary and physical policies in Keynesian and Neo-classical models.

Unit II: Three sector macro models

Aggregate demand and Aggregate supply; Neoclassical three sector model; Keynesian three sector model; Mundell-fleming model; imperfect and perfect capital mobility; relative effectiveness of monetary and fiscal policies under perfect and imperfect capital mobility.

Unit III: Recent developments in macro-economic theory

Monetarism-central propositions; new classical economics- theory of rational expectations; Lucas imperfect information model; supply side economics- laffer curve, Regan and supply side; success or failure; new Keynesian economics- central propositions; sticky prices, insider- outsider and efficiency wage models.

Unit IV: Macroeconomic policy and debates

Policy debates in Macroeconomics- dynamic inconsistency- the rule vs. discretion debate; case for central bank independence; inflation targeting – concept and experience, Taylors rule; monetary policy in light of trilemma configuration; Macro level impact of Global financial crises.

Basic Reading List:

- 1. Mankiw, N. G. (2008), Macroeconomics, Worth Publishers,
- 2. Romer, D. L. (2011), Advanced Macroeconomics, McGraw Hill Company Ltd. New York
- 3. Branson, W. H. (2005), Macroeconomics Theory and Policy, Harper & Row, New York
- Levacic R. and A. Rebman (1982), Macroeconomics An Introduction to Keynesian Neoclassical Controversies, Macmillan Press Ltd., London.
- 5. Wendy C. and D. Soskice (2007), Macroeconomics Imperfections, Institutions and Policies, Oxford University Press, New York.
- 6. Froyen R. (2013), Macroeconomics, Pearson Education, Delhi.
- 7. Dornbush R., S. Fischer and R. Stratz (2004), Macroeconomics, Tata McGraw-Hill, New-Delhi