# THE BHAWANIPUR EDUCATION SOCIETY COLLEGE

A MINORITY RUN COLLEGE. AFFILIATED TO UNIVERSITY OF CALCUTTA
RECOGNISED UNDER SECTION 2(F) & 12 (B) OF THE UGC ACT, 1956

## Programme Specific Outcomes (PSO)

## Economics (Honours) 2020-21

1. Acquiring valuable knowledge on of the basic tenets of Economics that affect the socio-economic lives of every citizen of any nation.

2. Increasing employability prospects - both at the corporate and/or academic levels.

3. Acquiring knowledge to undertake research in the future

4. Making students equipped to undertake multi-disciplinary courses and projects in the future

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## Programme Outcome (PO)

## Economics (Honours) 2020-21

| | Program Outcome | Description |
|---|---|---|
| **PO1** | **Domain Knowledge** | Have a clear and comprehensive understanding of the basic concepts and fundamental principles of the subject. Simultaneously they should also be able to logically and empirically process the various theoretical frameworks. |
| | **Method of Measurement:** | **Assessment (Internal & Final)** |
| **PO2** | **Critical Thinking** | Engage in rational, objective and independent thinking so as to identify, define and logically evaluate ideas; solve problems systematically and detect inconsistencies in arguments. |
| | **Method of Measurement:** | **Assessment (Internal & Final)** |
| **PO3** | **Communication Skills** | Clearly, succinctly and successfully deliver, receive and disseminate knowledge/ concepts - oral, written or otherwise. |
| | **Method of Measurement:** | **Regular Communication Activity Internal Assessment** |
| **PO4** | **Spirit of Enquiry and Lifelong Learning** | Have a curious and open mind, willing to attend to and/or accept new or differentiated ideas. |
| | **Method of Measurement:** | **Internal Assessment** |

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| **PO5** | **Spirit of Research and Innovation** | Have a scientific temper that would inculcate a spirit of research and enquiry which are fundamental for future policy initiatives and social growth. |
| | **Method of Measurement:** | **Assessment (Dissertation)** |
| **PO6** | **Social Concerns and Ethics** | Take a normative i.e. a value-based approach to various social conditions and situations, such that scientific objectivity and research finds a social acceptability |
| | **Method of Measurement:** | **Regular Teacher-Student Interactive Sessions** |
| **PO7** | **Environment and Sustainability** | Access to scientific information that is a prerequisite for increased environmental awareness and knowledge of sustainable development. |
| | **Method of Measurement:** | **Regular Teacher-Student Interactive Sessions** |

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| SUB: ECONOMICS (Honours) 2020-2021 | |
|---|---|
| **PAPER** | **COURSE OUTCOME (CO)** |
| **SEMESTER I** | |
| **PAPER CORE COURSE I** | |
| **INTRODUCTORY MICROECONOMICS (ECOA-CC-1-1-Th-Tu)** | |
| **Unit One: Exploring the subject matter of Economics** | |
| Scope & Method of Economics, Principles of Microeconomics, Interdependence & Gains from Trade, Reading and working with graphs | 1.1. Acquiring knowledge to think in the economic way. |
| **Unit Two: Demand and Supply: How Markets Work** | |
| Elementary theory of Demand, Elementary theory of Supply, Elementary theory of Market Price, | 1.2. Acquiring knowledge of markets and welfare |
| **Unit Three: Market & Adjustments** | |
| The evolution of Market economies, The Decision Takers, The Concepts of Markets, Different goods | 1.3. Acquiring clear knowledge of Market and Adjustments |
| **Unit Four: Market Sensitivity & Elasticity** | |
| Importance of elasticity in Choice decisions, Method of Calculation, Demand and Supply elasticities, Income & Cross Price elasticity, Applications | 1.4. Understanding Market Sensitivity and Elasticity |
| **Unit Five: Government Intervention** | |

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| The economic role of government with respect to market, Comparison of markets with or without government | 1.5. Critically analyzing the economic role of Government with respect to markets |
| **Unit Six: Utilitarian Approach** | |
| The history of Utility theory, Utility in Cardinal Approach, Ordinal Utility, Consumers equilibrium and demand curves | 1.6. Acquiring knowledge of Utilitarian Approach |
| **PAPER CORE COURSE II** | |
| **MATHEMATICAL METHODS IN ECONOMICS – I (ECOA-CC-1-2-Th-Tu)** | |
| **Unit One: Preliminaries** | |
| Sets & set operations, Convex sets and Functions, Limit & Continuity, Uses of the Concept of Continuity | 2.1. Acquiring knowledge on the various concepts and tools of mathematics applicable to economic analysis |
| **Unit Two: Functions of one real variable** | |
| Continuous functions of different types and their graphs, Concept of Derivatives, Applications in Economics - concepts of elasticity; marginal and average functions | 2.2. Acquiring knowledge on single variable functions and how to functionally establish basic economic principles and laws |
| **Unit Three: Single Variable Optimization** | |
| Local & global optima, Interpretation of necessary and sufficient conditions, Applications in Economics - optimization of profits and cost | 2.3. Acquiring knowledge on optimization and their economic application |
| **Unit Four: Integration of Functions** | |
| Integration of different types of functions, Method of substitutions and integration by parts, Applications in Economics - obtaining total from marginal | 2.4. Acquiring knowledge on integral algebra and their economic application |
| **Unit Five: Matrix Algebra** | |

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| Matrix, Rank of a Matrix, Determinants and inverse of a square matrix, Solution of a system of linear equations, System of non-linear equations, The concept of comparative statics, Application in I-O analysis | 2.5. Acquiring knowledge on matrix algebra and how to empirically interpret microeconomics and macroeconomics principles |
| **Unit Six: Game Theory** | |
| Concept of games, strategies, payoffs, Zero sum games, Dominant strategy equilibrium, Nash equilibrium, Nash equilibrium in context of some common games | 2.6. Acquiring knowledge on game theory |
| **SEMESTER II** | |
| **PAPER CORE COURSE III** | |
| **INTRODUCTORY MACROECONOMICS<br>(ECOA-CC-2-3-Th-Tu)** | |
| **Unit One: National Income Accounting** | |
| Macroeconomic data- Basic concepts of National Income accounting. The circular flow, Concepts of GNP, GDP, NNP, and NDP at market price and at factor cost, Measurement of National Income-Value Added Method and Expenditure Method. The problem of double counting, Role of Government. Concepts of Corporate Income, Corporate Savings, Personal Income, Personal Disposable Income and Personal Savings, Saving-Investment gap and its relation with budget deficit and trade surplus, National Income accounting and cost of living. Basic idea of India's national income | 3.1. Learning the basic economics behind the functioning of a nation and the world |
| **Unit Two: Simple Keynesian Model in a Closed Economy** | |

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| The Simple Keynesian Model (SKM) in a Closed Economy without Government- the Keynesian Consumption Function; the Keynesian Saving Function; income determination in SKM; stability of equilibrium; the concept of effective demand- the concept of demand-determined output; The Simple Keynesian Multiplier; paradox of thrift; the SKM in a Closed Economy with Government; government expenditure and tax; the government expenditure multiplier and the tax rate multiplier; the balanced budget multiplier; the budget surplus; effects of tax changes and government purchases on budget surplus; the full employment budget surplus. | 3.2. Acquiring knowledge on the determination of the basic macroeconomic indicators in a demand-constrained economy |
| **Unit Three: The Classical System** | |
| Basic ideas of Classical Macroeconomics, Say's Law and Quantity Theory of Money, Loanable fund theory, The Classical Theory of Income and Employment determination, Full Employment and wage-price flexibility, Classical Dichotomy and Neutrality of Money | 3.3. Developing ideas about policymaking |
| **Unit Four: Macroeconomic Foundations I** | |
| The bond market as the mirror image of the money market-the Walras Law. Relationship between bond price and rate of interest- the concept of Keynesian liquidity preference schedule-speculative demand for money and liquidity trap, Investment function: Concepts of Marginal productivity of capital, marginal efficiency of capital (MEC) and marginal efficiency of investment (MEI)- Jorgenson's neo-classical theory- Acceleration principle- fixed and variable. Multiplier-accelerator interaction | 3.4. Acquiring knowledge on the macroeconomic foundation |
| **PAPER CORE COURSE IV** | |
| **MATHEMATICAL METHODS IN ECONOMICS – II (ECOA-CC-2-4-Th-Tu)** | |
| **Unit One: Functions of several variables** | |

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| Continuous & differentiable functions, Euler's theorem, Implicit function theorem, Economic Applications | 4.1. Acquiring knowledge on the various concepts and tools of mathematics applicable to economic analysis |
| **Unit Two: Multi-variable Optimization** | |
| Optimization of non-linear functions, Constrained optimization with equality constraints, Inequality constraints, Value function and Envelope theorem, Optimization of Linear Functions, LPP and Applications | 4.2. Acquiring knowledge on the methods of analyzing and interpreting economic theories and concepts with the help of mathematical techniques |
| **Unit Three: Difference Equations** | |
| Finite Difference, Economic Application | 4.3. Developing quantitative analytical in algebra skills necessary for future research |
| **Unit Four: Differential Equations** | |
| Solution of Differential Equation, Economic Application, Qualitative Graphic Solution | 4.4. Developing quantitative analytical skills in algebra necessary for future research |
| **SEMESTER III** | |
| **PAPER CORE COURSE V** | |
| **INTERMEDIATE MICROECONOMICS – I (ECOA-CC-3-5-Th-Tu)** | |
| **Unit One: Theories of Consumer Behaviour and Applications** | |
| Inter-temporal choice (saving and borrowing), Revealed Preference, Choice under Uncertainty, Application of Consumer Behaviour in Construction of Price Indices | 5.1 Acquiring advanced knowledge on Theories of Consumer Behaviour and Applications |
| **Unit Two: Production and Costs** | |

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| Technology, Types of Production Function, Cost Structure | 5.2 Acquiring knowledge on the concepts and applications of the theories of Production and Costs |
| **Unit Three: The Firm and Perfect Market Structure** | |
| Organisation, Firms and Profit Maximisation, Marginal Revenue, Marginal Cost and Profit Maximisation, Perfect Competition, Consumer and Producer Surplus, Welfare and efficiency | 5.3 Developing the ability to understand different market structures and to focus on Perfectly Competitive Market and consequences of Government Intervention |
| **Unit Four: Input Market in Perfect Competition** | |
| Basic Concepts, Marginal Productivity theory of distribution, Labour Market, Land Markets and rent | 5.4 Acquiring knowledge on the Factor markets in the presence of Perfect Competition |
| **PAPER CORE COURSE VI** | |
| **INTERMEDIATE MACROECONOMICS – I (ECOA-CC-3-6-Th-Tu)** | |
| **Unit One: Income Determination in the Short-run (Part-II) : The IS-LM Model** | |
| IS-LM Model - equilibrium, stability and comparative statics, Crowding out, Effects of fiscal and monetary policies | 6.1. Acquiring advanced knowledge on the determination of the basic macroeconomic indicators in a demand-constrained economy |
| **Unit Two: Aggregate Demand and Aggregate Supply- the Complete Keynesian Model** | |
| Derivation of aggregate demand curve, Derivation of aggregate supply curves both in the presence and absence of wage rigidity, Equilibrium, stability, and comparative statics-effects of monetary and fiscal policies. Effects of wage cut, Unemployment equilibrium and its causes- possible solutions including real balance effect | 6.2. Acquiring knowledge on the complete modelling of an underemployment economy |
| **Unit Three: Keynes vs. Classics** | |
| Keynesian vs classical system, Hybrid models under Classical/Keynesian framework, Friedman's restatement of classical ideas | 6.3. Developing the ability to distinguish between the modeling of an underemployment economy and a full-employment economy |
| **Unit Four: Money Supply, Monetary Policy and Government Budgetary Operations** | |

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| Measures of money supply with special reference to India (M1,M2, M3 and M4) Balance sheet view of money supplied by the banking sector as a whole, High powered money –definition; Balance sheet of Reserve Bank of India and High powered money; Balance sheet of Commercial banks and basic ideas of money multiplier theory, Deposit multiplier, currency multiplier, reserve multiplier, credit multiplier and money multiplier in the context of the theory of money supply, Interest sensitivity of money supply and the slope of the LM curve, Monetary policy – Open Market Operations, Statutory Liquidity Ratio, Bank rate, variable reserve ratio, repo rate, Government Budget Deficit and Deficit Financing-Indian illustration. Deficit financing and monetary policy | 6.4. Acquiring knowledge on the fundamental concepts of money supply and its control |
| **Unit Five: Inflation, Unemployment and Expectations** | |
| The concept of Inflationary Gap; Demand pull vs. Cost push inflation; Mark-up inflation; The concept of stagflation, Central Bank's role in controlling inflation: Monetary policy; Inflation and unemployment trade-off, Four models of aggregate supply: The Sticky-Wage Model, The Worker-Misperception Model, The Imperfect Information Model and The Sticky-Price Model, Deriving the Phillips Curve from Aggregate Supply Curve; Short run and long- run Phillips curve – role of adaptive expectations and rational expectations, Disinflation, Sacrifice Ratio and policy ineffectiveness | 6.5 Acquiring knowledge on the concepts, measurements and modelling of inflation and unemployment |
| **PAPER CORE COURSE VII** | |
| **STATISTICAL METHODS FOR ECONOMICS (ECOA-CC-3-7-Th-Tu)** | |
| **Unit One: Introduction and Overview** | |
| Subject Matter - Distinction between Population & Sample, Representation of data - Graphical & Tabular Methods, Frequency Distribution | 7.1. Acquiring knowledge about the basics of Statistics and its application in Economics |
| **Unit Two: Descriptive Statistics** | |
| Measures of Central tendency, Dispersion, Moments, Skewness and Kurtosis, Correlation & Regression | 7.2. Acquiring knowledge of different measures of descriptive statistics |
| **Unit Three: Elementary Probability Theory** | |

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| Sample spaces and events, Axiomatic definition and properties, Theorem of Total Probability, Conditional Probability, Theorem of Compound Probability, Bayes' Theorem & its application | 7.3. Acquiring clear knowledge of basic elements of probability |
| **Unit Four: Probability Distributions** | |
| Random variables - discrete & continuous, Probability distributions – p.m.f. & pdf, Expectation - mean, variance, moments, m.g.f., Binomial, Poisson & Normal distributions, Joint distribution functions - discrete & continuous | 7.4. Understanding Probability Distributions of discrete and continuous type |
| **Unit Five: Sampling** | |
| Principle steps in sample survey - population, sample, parameter, statistic; Methods of Sampling - SRSWR, SRSWOR, Stratified, Multi-stage; Sampling distribution of sample mean and proportion | 7.5. Acquiring knowledge of the different methods of sampling and its applications |
| **Unit Six: Statistical Inference** | |
| Point estimation, Basic principles of OLS, MLE, Method of Moments, Interval Estimation, Testing of Hypothesis - null, alternative, Type I, Type II, p value | 7.6. Critically analyzing the basic concepts of estimation and statistical inference |
| **PAPER SKILL ENHANCEMENT COURSE I (GR. A)** | |
| **DATA ANALYSIS**<br>**(ECOA-SEC-3-1A-Th)** | |
| **Unit One: Collection & Representation of Data** | |
| Collection of data - some methodological issues (Census, sample survey), Representation of data, The basics of data management in Stata/ R | SEC-A.1 Learning about data collection and representation, and using a statistical software |
| **Unit Two: Indian Official Statistics (Basic Concepts)** | |
| Central Statistical Offices - NAS, ASI, IIP, National Sample Survey Office (NSSO), Census of India - Population census 2011, RBI - Handbook of Statistics on Indian Economy | SEC-A.2 Gaining knowledge on official data sources in India, their collection methodology and using such data |
| **RURAL DEVELOPMENT**<br>**(ECOA-SEC-3-1A-Th)** | |
| **Unit One: Aspects of Rural Development** | |
| Concept of Rural Development, Rural Development vs. Agricultural Development, Role of NGOs in Rural Development, Rural Non-Farm Sector and Rural Development | SEC-A.3 Acquiring knowledge on the various concepts of rural development, |

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| | agricultural development and rural non-farm sector |
| **Unit Two: Panchayats and Rural Development** | |
| Decentralized Planning and Participatory Development, Role of Panchayats in Decentralized Rural Development, Participatory Rural Appraisal, Panchayats and Rural Development in West Bengal | SEC-A.4 Acquiring knowledge and analyzing the role of Panchayats in rural development |
| **Unit Three: Rural Credit and Self-Help Groups (SHGs)** | |
| Role National Bank for Agriculture and Rural Development (NABARD) for promoting Rural, Constraints of micro-enterprises in rural areas, Credit needs for rural non-farm sector, the concept of Micro credit; Micro credit and the role of Grameen Bank, Need for SHG for formation and features of SHG, SHGs in India | SEC-A.5 Acquiring knowledge and analyzing the role of rural credit and self-help groups for promoting rural development |
| **Unit Four: Critical Evaluation of Selected Government Programmes and Rural Development** | |
| Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) and Rural Development, Child labour and school drop-out in rural areas. Mid-day Meal and Rural Development, National Rural Health Mission (NRHM) and Rural Development, Pradhan Mantri Gram Sadak Yojana (PMGSY) and Rural Development | SEC-A.6 Critically evaluating the Government programs on rural development |
| **SEMESTER IV** | |
| **PAPER CORE COURSE VIII** | |
| **INTERMEDIATE MICROECONOMICS – II (ECOA-CC-4-8-Th-Tu)** | |
| **Unit One: Imperfect Market Structure** | |
| Monopoly and barriers to entry; Pricing with market power; First, Second and Third degree price discrimination, multi-plant monopoly; Monopolistic competition & Oligopoly | 8.1 Developing the ability to understand different aspects of Imperfect market structure and to focus on Monopoly, Monopolistic Competition and Oligopoly |
| **Unit Two: Input Market under Imperfect Competition** | |
| Monopsony and bilateral monopoly in labour market | 8.2 Acquiring knowledge and obtain clear and comprehensive understanding of the basic concepts of the topics |
| **Unit Three: General Equilibrium, Efficiency and Welfare** | |

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| General Equilibrium and Economic Efficiency, Reasons for Market failure, Pareto efficiency and market failure; Markets with asymmetric information, adverse selection, moral hazards, agency problems | 8.3 Learning the basic concepts underlying the theories of General Equilibrium, Efficiency and Welfare |
| **PAPER CORE COURSE IX** | |
| **INTERMEDIATE MACROECONOMICS – II (ECOA-CC-4-9-Th-Tu)** | |
| **Unit One: Basic Tenets of New Classical and New Keynesian Theories** | |
| New Classical Theory-The concept of rational expectations and the theory of real business cycle- introductory ideas; New Keynesian Theory- nominal rigidities and real rigidities, rigidities in interest rates and credit rationing-introductory ideas | 9.1 Understanding the fundamental flaws in traditional Classical and Keynesian macroeconomic models, and hence knowing advanced theories emerging in these two realms |
| **Unit Two: Macroeconomic Foundations -II** | |
| Consumption: Keynesian consumption function; Fisher's theory of optimal intertemporal choice; life-cycle and permanent income hypotheses; Dusenberry's relative income hypothesis; rational expectations and random-walk of consumption expenditure; Demand for money: Regressive Expectations and Tobin's portfolio choice models; Baumol's inventory theoretic money demand. | 9.2 Learning the behaviour and dependence of consumption and demand for money, primarily on income |
| **Unit Three: Economic Growth** | |
| Harrod and Domar models of economic growth; Solow one sector growth model-golden rule- -dynamic efficiency; Technological progress; Elements of endogenous growth theory-basic ideas-the AK model | 9.3 Acquiring knowledge on the theories of economic growth and hence devising policies to promote long term growth |
| **PAPER CORE COURSE X** | |
| **INTRODUCTORY ECONOMETRICS (ECOA-CC-4-10-Th-Tu)** | |
| **Unit One: Nature & Scope of Econometrics** | |
| Distinction between Economic Model and Econometric model; Concept of stochastic relation, Role of random disturbance in econometric model; Types of data; Application of Econometrics in different branches of social science | 10.1 Understanding the compatibility between econometric theory and statistical analysis |
| **Unit Two: Classical Linear Regression Model (Simple linear regression and multiple linear regression): part 1** | |

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| The classical assumptions (basic interpretation); Concepts of population regression function and sample regression function; Estimation of model by method of ordinary least squares (Derivation in simple linear model (SLRM) and multiple linear model (MLRM) with two regressors only); Simple correlation, partial correlation and multiple correlation (Definition, and interpretation in the context of SLRM and MLRM); Limitations of SLRM and additional complications in MLRM; Economic interpretations of the estimated model | 10.2 Acquiring knowledge on application of statistical tools in theoretical economic models and doing empirical analysis |
| **Unit Three: Classical Linear Regression Model (Simple linear regression and multiple linear regression): part 2** | |
| Properties of the Least Squares Estimators (BLUE) in SLRM- Gauss-Markov theorem; Qualitative (dummy) independent variables – intercept dummy and slope dummy (only interpretation of the model); Forecasting - Ex-post forecast and Ex-ante forecast, forecast error (only for two variable model) | 10.3 Acquiring knowledge on empirical analysis in Economics |
| **Unit Four: Statistical inference in linear regression model** | |
| Use of standard normal, chi2, t, and F statistics in linear regression model; Testing hypothesis; Single test (t test and chi2 test) Joint test (F test); Goodness of fit (in terms of R2, adjusted R2 and F statistic), Analysis of Variance (ANOVA); Statistical significance and economic importance | 10.4 Acquiring knowledge on empirical analysis in Economics using Statistical measures |
| **Unit Five: Violations of Classical Assumptions** | |
| Multicollinearity - Consequences, Detection (Variance Inflationary Factor (VIF)) and Remedies; Heteroscedasticity - Consequences, Detection (Lagrange Multiplier test) and Remedies; Autocorrelation - Consequences, Detection (Durbin-Watson test) and Remedies | 10.5 Acquiring knowledge on empirical analysis |
| **Unit Six: Specification Analysis** | |
| Omission of a relevant variable; Inclusion of irrelevant variable; Tests of specification errors; Testing for linearity and normality assumptions | 10.6 Acquiring knowledge on economic model building and empirical analysis |
| **PAPER SKILL ENHANCEMENT COURSE II (GR. B)** | |
| **RESEARCH METHODOLOGY (ECOA-SEC-4-B(2) -Th)** | |
| **Unit One: Methodological Issues 1** | |

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| Locating the basic issues- theme based literature survey and motivation behind any study- objectives of the study-development of writing skills; Designing the sampling frame in case of field survey- the role of pilot survey; The role of random numbers in drawing random sample; Methods behind preparation of questionnaire in case of field survey; Data entry after field survey; Tabular representation of data and graphs for data interpretation | SEC-B.1 Acquiring knowledge how to do research – both theoretical and empirical research |
| **Unit Two: Methodological Issues 2** | |
| Theoretical and Empirical Research in Economics; Common sections of an ideal research paper in Economics; Illustrations of empirical research work. Reporting the regression results and interpretation of the results: the role of statistical inference; Illustrations of theoretical research: specification of the model, closing the model, checking stability of the model for meaningful comparative static results; Role of footnotes or end notes in a research paper; Bibliography, reference and citation; Writing the abstract of a research paper; Key words and JEL Classification; Presentation of a research paper through power point. Basic rules to be followed for a good presentation. Role of diagrams, graphs, pictures and charts | SEC- B.2 Acquiring knowledge on how to write a dissertation |
| **MANAGERIAL ECONOMICS** **(ECOA-SEC-4-B(2) -Th)** | |
| **Unit One: Demand, Cost and Profit Analysis** | |
| Demand for durable and non-durable products, demand forecasting techniques; Cost estimation; Cost-volume-profit analysis (break even analysis)- objectives and assumptions; determination of breakeven point, limitations of c-v-p analysis | SEC- B.3. Acquiring knowledge on estimation of cost and cost-volume-profit analysis |
| **Unit Two: Pricing Policies and practices** | |
| Factors governing prices, price discounts and differentials, price forecasting | SEC- B.4. Acquiring knowledge on factor governing price and methods of price forecasting |
| **Unit Three: Capital Budgeting** | |
| What is capital budgeting, need for capital budgeting, different steps in capital budgeting, Capital budgeting appraisal methods – payback method, accounting rate of return method, net present value method, interest rate of return method, benefit cost ratio method. Capital rationing, alternative methods of financing investments | SEC- B.5. Acquiring knowledge on the need, steps and traditional and modern methods of capital budgeting |
| **Unit Four: Cost of capital** | |

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| Cost of debt capital, cost of share capital, cost of equity capital, cost of retained earnings | SEC- B.6. Acquiring knowledge on the cost of capital and retained earnings |
| **Unit Five: Inventory Management** | |
| Inventory costs, concepts of average inventory, various inventory models- economic order quantity, optimum number of orders per year, optimum number of days supply per order. | SEC- B.7. Acquiring knowledge on the concepts of inventory management. |
| <div align="center">**SEMESTER V**</div> | |
| <div align="center">**PAPER CORE COURSE XI**</div> | |
| <div align="center">**INTERNATIONAL ECONOMICS<br>(ECO-A-CC-5-11-Th-Tu)**</div> | |
| **Unit One: Absolute and Comparative Advantages of Trade** | |
| Adam Smith's theory of absolute advantage; David Ricardo's theory of comparative advantage; Arbitrage as the basis and direction of trade; fundamental sources of cross-country price differences and arbitrage-concept of comparative advantage; externalities, regulation and perverse comparative advantage; One factor economy, production possibility frontier, relative demand and relative supply, terms of trade, trade in the Ricardian world, determination of intermediate TOT, complete vs incomplete specialization, complete specialization and gains from trade | 11.1 Acquiring knowledge and obtain clear and comprehensive understanding of the basic concepts of the topics |
| **Unit Two: The Building Blocks of Trade Theory** | |
| The concept of community indifference curve-Justification and properties. The need for trade indifference curves, derivation of trade indifference curves, properties of trade indifference map, Offer curves and its properties. Three important elasticities- the elasticity of offer curves, the elasticity of demand for imports, the elasticity of supply of exports. International equilibrium and offer curves, terms of trade (TOT) and stability, the Marshall-Lerner condition. Gains from Trade (GFT) theorem, illustration of GFT, decomposition of GFT, substitution possibilities and magnitude of GFT. Production structure for neo-classical trade models, role of constant returns to scale, the concept of unit isoquants, duality in the production structure, significance of the envelope condition in trade models. | 11.2 Acquiring knowledge and obtain clear and comprehensive understanding of the basic concepts of the topics |
| **Unit Three: Factor Endowment and Trade (Heckscher-Ohlin-Samuelson Model)** | |
| Heckscher-Ohlin (HO)theorem and price vs physical definitions of relative factor abundance. Role of homotheticity of tastes in the | 11.3 Learning the basic concepts underlying H-O theorem, Stolper- |

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| context of physical definition. Factor Intensity Reversal in the context of price and physical definitions and invalidity of HO Theorem. Factor intensity ranking, one-to-one correspondence between commodity price ratio & factor price ratio (Stolper-Samuelson theorem), One to one correspondence between endowment ratio and production proportion (Rybczynski theorem). The Factor Price Equalization Theorem. Factor price equalization and complete specialization. Incomplete Specialization, Factor price equalization and Factor Intensity Reversal. Empirical studies- Leontief Paradox | Samuelson theorem, Rybczynski theorem, Factor price equalization theorem and Leontief Paradox |
| **Unit Four: Applications of Neo-classical Trade Models for developing countries** | |
| Jones (1965) Heckscher-Ohlin type 2x2(two factors-two commodities) full employment model for small open developing economies. Basic structure –significance of the assumption of constant returns to scale- the decomposability property-the capital intensity condition in physical and value terms- Implications of Stolper-Samuelson and Rybczynski theorems-the price and output magnification effects. Jones (1971) 3x2(three factors-two commodities) specific-factor model. Basic structure-significance of the assumption of constant returns to scale-the in-decomposability property. Implications of price magnification effects in specific factor model | 11.4 Acquiring knowledge on application of Neo-classical Trade models for developing countries |
| **Unit Five: Trade Policy** | |
| Partial Equilibrium Analysis of Tariff - cost–benefit, Quota, Quota-Tariff equivalence & non-equivalence, monopoly effects of quota, subsidy and voluntary export restraint. General Equilibrium Analysis-distinction between large and small economy, welfare effects of a tariff on small country and large country. Tariff ridden offer curve, Tariff war, Optimum tariff for large economy, Metzler's Paradox | 11.5 Developing the ability to distinguish between the partial equilibrium analysis of tariff in small country and large country |
| **Unit Six: Open Economy Macroeconomics and Balance of Payments** | |
| Determination of equilibrium income in an open economy. Foreign Trade Multiplier with & without repercussion effects. Balance of Payment accounts in an open economy. Autonomous and accommodating transactions. Fixed & Flexible Exchange Rates: adjustment of demand and supply of Foreign Exchange, Effect of devaluation, The Mundel-Fleming Model (IS LM BP model) | 11.6 Acquiring knowledge on the determination of equilibrium income in an open economy, on the adjustment of demand and supply of foreign exchange and on the effects of devaluation |
| **PAPER CORE COURSE XII** | |
| **INDIAN ECONOMY**<br>**(ECO-A-CC-5-12-Th-Tu)** | |

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| **Unit One: Economic Development since Independence** | |
| Growth and development under different policy regimes (from planning to market-based development) - Objectives, achievements and failures of Planning, Economic crisis during the late 1980s, Economic Reforms –Critical Analysis, Structural changes in the post-reforms period. Regional variation of growth and development. | 12.1 Acquiring knowledge on the development policies undertaken in India since 1947 |
| **Unit Two: Population and Human Development** | |
| Demographic trends and issues. Education and health: Basic problems and Government measures, Right to Education (RTE) Act 2009 | 12.2 Acquiring knowledge on the structure, characteristic and growth trends of the population of India |
| **Unit Three: Growth and Distribution** | |
| Trends in GDP and per capita GDP. Growth, poverty and inequality. Youth unemployment (School Transition to Work). Policy perspectives in growth and distribution | 12.3 Acquiring knowledge on the growth trends of important macroeconomic parameters in India |
| **Unit Four: Economic Reforms in India** | |
| Banking sector reforms. Reforms in tax policy. Reforms in the external sector. Reforms in Labour market | 12.4 Acquiring knowledge on the New Economic Policy 1991 |
| **DISCIPLINE SPECIFIC ELECTIVE – A (1)** | |
| **APPLIED ECONOMETRICS (ECO-A-DSE-5-A(1)-Th-P)** | |
| **Unit One: Steps in Empirical Research** | |
| Use of econometric models in empirical research – some basic concepts. The basic commands in Stata / R | DSE-A1.1Acquiring knowledge on the use of econometric models in empirical research |
| **Unit Two: Regression Diagnostics and Specification** | |
| Misspecification, Functional forms, Model selection, Application with Stata / R | DSE-A1.2 Acquiring knowledge on regression diagnostics and specification |
| **Unit Three: Application of Regression Analysis** | |
| Cross section analysis – Linear regression model with two regressors (by using survey data like NSSO with Stata / R). Time series analysis (very preliminary level) – Basic concepts of time series. Estimating linear trend (by using NAS with Stata / R). Panel data analysis – basic | DSE-A1.3 Acquiring knowledge on the use of statistical tool for cross section analysis, time series analysis and panel data analysis |

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| concepts of fixed effects model; random effects model – (Application with Indian Official Statistics using Stata / R) | |
| **ECONOMIC HISTORY OF INDIA (1857-1947)** **(ECO-A-DSE-5-A(1)-Th-Tu)** | |
| **Unit One: Impact of British rule on India** | |
| Deindustrialization. Commercialization of agriculture. Economic Drain | DSE-A1.4 Acquiring knowledge on the impact of the British rule in pre-independent India |
| **Unit Two: Aspects of Economic Policies in British India** | |
| Land policy, Policy of Discriminating Protection, Early Industrial Development and Managing Agency System, Currency and monetary policy, Development of Infrastructure – Railways | DSE-A1.5 Acquiring knowledge on the different aspects of economic policies taken by the British in India |
| **DISCIPLINE SPECIFIC ELECTIVE – B (1)** | |
| **COMPARATIVE ECONOMIC DEVELOPMENT (1850-1950)** **(ECO-A-DSE-5-B(1)-Th-Tu)** | |
| **Unit One: Strategies and Policies for Economic Development** | |
| Laissez-faire and free trade. Strategy of industrialization in Soviet Union | DSE-B1.1 Acquiring knowledge on the different strategies undertaken for development. |
| **Unit Two: Regions of contemporary development** | |
| Success stories of Asia: Japan, South East Asia and China. Crisis and failures of Latin America and Africa | DSE-B1.2 Acquiring knowledge about the development experience of different regions across the world like Latin America, Africa etc. |
| **FINANCIAL ECONOMICS** **(ECO-A-DSE-5-B(1)-Th-Tu)** | |
| **Unit One: Investment Theory and Portfolio Analysis** | |
| Deterministic cash-flow streams: Basic theory of interest; discounting and present value; internal rate of return; evaluation criteria; fixed-income securities; bond prices and yields; interest rate sensitivity and duration; immunisation; the term structure of interest rates; yield curves; spot rates and forward rates. Single-period random cash flows: Random asset returns; portfolios of assets; portfolio mean and variance; feasible combinations of mean and variance; mean-variance portfolio analysis: the Markowitz model and the two-fund theorem; | DSE-B1.3 Acquiring knowledge on investment theory and optimal portfolio management and analysis |

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| risk-free assets and the one-fund theorem. CAPM: The capital market line; the capital asset pricing model; the beta of an asset and of a portfolio; security market line; use of the CAPM model in investment analysis and as a pricing formula | |
| **Unit Two: Options & Derivatives** | |
| Introduction to derivatives and options; forward and futures contracts; options; other derivatives; forward and future prices; stock index futures; interest rate futures; the use of futures for hedging; duration-based hedging strategies; option markets; call and put options; factors affecting option prices; put-call parity; option trading strategies: spreads; straddles; strips and straps; strangles; the principle of arbitrage; discrete processes and the binomial tree model; risk-neutral valuation. | DSE-B1.4 Acquiring knowledge on financial instruments like options and derivatives |
| **Unit Three: Corporate Finance** | |
| Patterns of corporate financing: common stock; debt; preferences; convertibles; Capital structure and the cost of capital; corporate debt and dividend policy; the Modigliani- Miller theorem. | DSE-B1.5 Acquiring knowledge on financial management in the corporate sector |
| **SEMESTER VI** | |
| **PAPER CORE COURSE XIII** | |
| **PUBLIC ECONOMICS**<br>**(ECO-A-CC-6-13-Th-Tu)** | |
| **Unit One: Government in a Market Economy** | |
| Market failure and externalities; public and merit goods; Government intervention; Public Expenditure for financing development | 13.1 Acquiring knowledge the role of Government in a market economy |
| **Unit Two: Choice and Public Economics** | |
| Characteristics of Pure Public Good; Distinction between Pure Public Good and Private Good; Market Failure in case of Pure Public Good Optimal provision of Public Goods - Private Provision and Public Provision of Public Goods, Lindahl Equilibrium, Voting Equilibrium | 13.2 Acquiring knowledge on public goods and their importance in contemporary economies |
| **Unit Three: The Revenue and Expenditure of the Government** | |
| Classification of Taxes; Canons of Taxation; Principles of Taxation - Benefit Principle, Equal Sacrifice Principle, Ability to Pay Principle; Incidence and Burden of Taxes; Effects of taxation on income distribution, work efforts, and on savings, The Laffer curve; | 13.3 Acquiring knowledge on taxation, its policies and impacts |

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| Comparison between direct and indirect taxes – income and substitution effects; Optimal Taxation | |
| **Unit Four: Public Finance** | |
| Meaning and Classification of Public Expenditure - government budget and its types, government expenditure and tax multipliers, balanced budget multiplier; Meaning of Public Debt; Sources of Public Borrowings: internal and external borrowing; Effects of Public Debt; Indian Public Finance – Fiscal Federalism in India | 13.4 Acquiring knowledge on all aspects of fiscal income expenditure structure |
| **PAPER CORE COURSE XIV** | |
| **DEVELOPMENT ECONOMICS**<br>**(ECO-A-CC-6-14-Th-Tu)** | |
| **Unit One: Meaning of Economic Development** | |
| Income Approach and Capability Approach Construction and interpretation of HDI; international variations in development measures; comparing development trajectories across nations and within them. Dependency school of development. | 14.1 Acquiring knowledge on the concepts of growth and development |
| **Unit Two: Poverty & Inequality** | |
| Inequality axioms; a comparison of commonly used inequality measures. Gender Inequality, connections between inequality and development. Poverty measurement, HPI; poverty traps and path dependence of growth processes. Vicious Circle of Poverty Hypothesis | 14.2 Acquiring knowledge on inequality and development and the different measures of inequality |
| **Unit Three: Dual Economy Models** | |
| The concept of surplus labour and disguised unemployment. Peasants and Dualism with and without surplus labour. Interdependence of agriculture and Industry (Lewis model, Ranis-Fei model). Rural-Urban Migration (Harris- Todaro model) | 14.3 Acquiring knowledge on surplus labour and disguised unemployment and also transformation of the society |
| **Unit Four: Population Growth & Economic Development** | |
| Basic concepts (Birth and Death Rates, mortality, fertility). Demographic transition theory. Cost of children, externalities. Low Level Equilibrium Trap models and their criticism-critical minimum effort theory (Nelson and Leibenstein) | 14.4 Acquiring knlowledge on different aspects of demography and different models of population growth and economic development |
| **Unit Five: Development Strategies** | |

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| Balanced vs. Unbalanced Growth Theories. Choice of Techniques | 14.5 Acquir knowledge to distinguish between balanced and unbalanced growth theories and on the selection of techniques of production |
| **Unit Six: Political Institutions and the State** | |
| Definition of institutions, Evolution of Political and Economic Institutions. The determinants of democracy. Alternative institutional trajectories and their relationship with economic performance. Within-country differences in the functioning of state institutions. State ownership and regulation. Government failures and corruption | 14.6 Acquiring knowledge on political institutions and determinants of democracy |
| **DISCIPLINE SPECIFIC ELECTIVE – A (2)** | |
| **MONEY AND FINANCIAL MARKETS<br>(ECO-A-DSE-6-A(2)-Th-Tu)** | |
| **Unit One: Introduction to money and Money and Banking** | |
| Concept, functions, measurement; theories of money supply determination. | A2.1 Acquiring an overview of financial management |
| **Unit Two: Financial Institutions, Markets, Instruments and Financial Innovations** | |
| Role of financial markets and institutions; problem of asymmetric information – adverse selection and moral hazard; financial crises. Money and capital markets: organization, structure and reforms in India; role of financial derivatives and other innovations. Why are banks special Institutions? How banks act as a leveraging mechanism | A2.2 Acquiring knowledge on the ever-evolving financial institutions, markets instruments and innovations |
| **Unit Three: Financial Markets and Interest Rates Behaviour** | |
| Determination; sources of interest rate differentials. Theories of term structure of interest rates; interest rates in India | A2.3 Acquiring knowledge on the cost of funds |
| **Unit Four: Banking System** | |
| Balance sheet and portfolio management; Multiple Deposit Creation, Determinants of the Money Supply. Indian banking system- Changing role and structure- banking sector reforms | A2.4 Acquiring knowledge on the banking systems in economies with special reference to India |
| **Unit Five: Central Banking and Monetary Policy** | |
| Functions, balance sheet; goals, targets, indicators and instruments of monetary control; Monetary management in an open economy; current monetary policy of India | A2.5 Acquiring knowledge on the role of central banks in monetary policies |

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| **ISSUES IN INDIAN ECONOMY**<br>**ECO-A-DSE-6-A(2)-TH-P** | |
| **Unit One: Growth and Structural Changes** | |
| Trends in national income and per capita income- Analysis with official statistics. Structural Composition of national income and employment with NAS and NSSO data | A2.6 Acquiring knowledge on the trends in national income and per capita along with the structural composition |
| **Unit Two: Macroeconomic Policies and their Impact** | |
| Fiscal Policy. Trade and investment. Financial and monetary policies. Inflation and measures to control inflation. Labour laws and regulation | A2.7 Acquiring knowledge on different macroeconomic policies and their impacts |
| **Unit Three: Policies and Performance in Agriculture** | |
| Growth; productivity; agrarian structure and technology, capital formation. Agricultural marketing. Food security and food policy. Pricing and procurement. WTO and Indian agriculture | A2.8 Acquiring knowledge on the agrarian structure of the country |
| **Unit Four: Policies and Performance in Industry** | |
| Output, employment and productivity growth. Regional variation of industrial growth. Small scale industries- problems and prospects. Public sector; competition policy. Foreign direct investment in industry. Economic reforms and industry | A2.9 Acquiring knowledge on the output and employment of the industrial sector |
| **Unit Five: Trends and Performance in Services** | |
| Formal and informal sectors. Banking and insurance. Trade in services | A2.10 Acquiring knowledge on trends and performance in different sectors of the economy |
| **DISCIPLINE SPECIFIC ELECTIVE – B (2)** | |
| **ENVIRONMENTAL ECONOMICS**<br>**(ECO-A-DSE-6-B(2)-Th-Tu)** | |
| **Unit One: Introduction** | |
| What is environmental economics; Review of microeconomics and welfare economics. Interlinkages between the economy and environment. | B2.1Acquiring knowledge on the interlinkages between the economy and the environment. |
| **Unit Two: Efficiency and Market Failure** | |

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| Pareto optimality and market failure in the presence of externalities. Property rights and the Coase theorem. Public goods/ bads and market failure | B2.2 Acquiring knowledge about the presence of externalities and how it leads to market failure |
| **Unit Three: The Design and Implementation of Environmental Policy** | |
| Pigouvian Fees – Single Polluter, Multiple Polluters, Fees vs Subsidies. Regulating Pollution: Command and Control, Economic Incentives. The Basic Theory of Tradeable Pollution Permit | B2.3 Acquiring knowledge on the design and implementation of different environmental policies |
| **Unit Four: International Environmental Problems** | |
| Transboundary Pollution – Transboundary Pollution as a problem of international externalities. International Trade and Environment – Pollution Havens. International Environmental Agreements – Basic idea about Montereal and Kyoto Protocol and Talks on Climate Change | B2.4 Acquiring knowledge on how to tackle different international environmental problems |
| **Unit Five: Measuring the values of Environmental Costs and Benefits** | |
| Concepts of Willingness to pay (WTP) and Willingness to accept compensation (WTAC), Difference between the two concepts. Direct and Indirect Methods of Valuation – Contingent valuation, Travel Cost, hedonic Pricing – basic concepts only (no econometric techniques) – when they should be used, what are the advantages and disadvantages of these methods | B2.5 Acquiring knowledge on the valuation of environmental costs and benefits |
| **ISSUES IN DEVELOPMENT ECONOMICS** **(ECO-A-DSE-6-B(2)-Th-Tu)** | |
| **Unit One: 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. Migration | B2.6  Acquiring knowledge on the issues of demography and economic development |
| **Unit Two: Land, Labor and Credit Markets** | |
| The distribution of land ownership; land reform and its effects on productivity. Contractual relationships between tenants and landlords. Land acquisition; nutrition and labor productivity. Informational problems and credit contracts. Microfinance. Inter- linkages between rural factor markets. | B2.7 Acquiring knowledge on the contractual relationship between land labour and credit markets |
| **Unit Three: Individuals, Communities and Collective Outcomes** | |

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| Individual behavior in social environments. Multiple social equilibria. Governance in organizations and in communities. Individual responses to organizational inefficiency. | B2.8 Acquiring knowledge about individual and collective behaviour in social environments |
| **Unit Four: Environment and Sustainable Development** | |
| Defining sustainability for renewable resources. A brief history of environmental change. Common-pool resources. Environmental externalities and state regulation of the environment. Market based instruments, economic activity and climate change. | B2.9 Acquiring knowledge about issues relating to environment and sustainable development |
| **Unit Five: Globalization** | |
| Globalization in historical perspective. The economics and politics of multilateral agreements. Trade, production patterns and world inequality. Financial instability in a globalized world. India in the context of global economy | B2.10 Acquiring knowledge on the idea of globalization from a historical perspective and the study of India in this context |

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