



Barrackpore Rastraguru Surendranath College

Teaching Plan

Department of Economics

2022-23

NAME OF THE PROGRAMME

UG CBCS ECONOMICS HONOURS COURSE

PROGRAMME OUTCOME

1. Economics is the study to understand how individuals, households, business organizations and government allocate the scarce resources within the economy to achieve maximum welfare.
2. This discipline helps to develop conceptual behavioral models to predict responses to changes in market conditions.
3. The program will enable the students to acquire knowledge of Economic System.
4. The programme will help the students to learn Mathematical and statistical skill in the domain of economics. Rigorous statistical analysis is used to investigate different economic events and changes.
5. It Helps the students to acquaint with basic and applied econometric tools and methods to estimate different economic facts.
6. Enables the learners to use the knowledge of economics in the analysis of developmental perspectives.
7. Provides the knowledge of Indian Economics and related perspectives.
8. Helps to design economic and development policies.

Notes:

You can merge cells in between and add students' seminars and class tests / internal assessment.

For incorporating PO / CO at UG level, you may refer to your WBSU CBCS syllabus.

If not there you can refer to the UGC model syllabus

https://www.ugc.ac.in/ugc_notices.aspx?id=MTA3Nw==

Semester		I			
Course Title	Introductory Micro Economics				
Course Code	ECOACOR11T	Credit	06		
Course Outcome	<p>After successful completion of this course students will be able to:</p> <ul style="list-style-type: none"> • Understand the fundamental problems of an economy and optimal allocation of resources to meet the needs of the society. • Learn the market clearing mechanism for setting up equilibrium price and quantity depending on the demand and supply structures from aggregate to disaggregate unit level. • Learn how various economic agents such as, consumers; firms etc. behave rationally to optimize their goals given the economic resources. • Understand the short run and long run behavior of firms in a given demand condition under perfectly competitive setup. 				
Scheme of Instruction					
Total Duration	95 Hours	Class/Week	4	Hours/week	4
Instruction Mode	Lecture, PPT, Chalk Board				
Scheme of Examination					
Maximum Score	75	Internal	25	End Semester	50
Course Mapping					

Units	Course Content	Lecture Hour (Cumulative)
01	<p>Exploring the subject matter of Economics</p> <p>Why study economics? Scope and method of economics; the economic problem: scarcity and choice; Distinction between Microeconomics and Macroeconomics; the question of what to produce, how to produce and how to distribute output; the basic competitive model; prices, property rights and profits; incentives and information; rationing; opportunity sets; economic systems.</p>	No. of Hours: 10
02	<p>Supply and Demand: How Markets Work, Markets and Welfare</p> <p>Markets and competition; determinants of individual demand/supply; demand/supply schedule and demand/supply curve; market versus individual demand/supply; shifts in the demand/supply curve, demand and supply together; how prices allocate resources; elasticity and its application; controls on prices; taxes and the costs of taxation; consumer surplus; producer surplus and the efficiency of the markets.</p>	No. of Hours: 15
03	<p>The Households</p> <p>The consumption decision - budget constraint, consumption and income/price changes, demand for all other goods and price changes; description of preferences (representing preferences with indifference curves); properties of indifference curves; consumer's optimum choice; income and substitution effects (Hicks & Slutsky); Ordinary and Compensated demand curves, Inferior goods and Giffen goods, Price consumption and income consumption curves.</p>	No. of Hours: 40
04	<p>Production and Cost</p> <p>Production function, Total, Average and Marginal</p>	No. of Hours: 20

	products, Iso-quants and economic regions of production, Cost minimization and expansion path, Elasticity of substitution, Economies of scale, Cobb Douglas, Fixed coefficient and CES functions, Short run and long run costs, Derivation of the cost functions from production function.	
05	Market Structure Different types of market structures- Perfect competition, Monopoly, Monopolistic Competition and Oligopoly (concepts only)	No. of Hours: 10

Semester		I			
Course Title	Mathematical methods for Economics I				
Course Code	ECOACOR02T	Credit	06		
Course Outcome	<p>After successful completion of this:</p> <ul style="list-style-type: none"> • Understand the transmission of basic mathematics that enables the creation of economic theory in general. • Understand the application of mathematical techniques to economic theory in general. • Understand the process of optimization techniques in economic theory in general. • In this course, particular economic models are not the ends and the material to be taught is indicated by the contents of the prescribed textbook. 				
Scheme of Instruction					
Total Duration	98	Class/Week	4	Hours/week	4
	Hours				

Instruction Mode	Lecture, PPT, Chalk Board				
Scheme of Examination					
Maximum Score	75	Internal	25	End Semester	50
Course Mapping					
Units	Course Content			Lecture Hour (Cumulative)	
01	<p>Preliminaries</p> <p>Concept: Sets and set operations; relations; functions and their properties; number systems.</p> <p>Set Theory: Definition of a set and discussion of related concepts; Set types; Operations on sets; Nested sets; Cartesian product; Concept of Euclidean Space</p> <p>Functions and Relations: Definitions; Concepts of ‘range’, ‘domain’ and ‘mapping’; Explicit and implicit functions; Types of functions and correspondences (polynomial, exponential, logarithmic, power)</p>			No. of Hours: 15	
02	<p>Brief Review of Differential and Integral Calculus:</p> <p>Concepts of ‘limits and continuity’, ‘derivative’, ‘partial derivative’, ‘total differential’ and ‘integral’ (stress on both intuitive and mathematical understanding); differentiable functions: Applications of differential and integral calculus to the study of functions: level curves; slope and curvature of functions, area under a curve etc. second and higher order derivatives: Properties and applications.</p> <p>Applications: Expenditure function and its</p>			No. of Hours: 20	

	properties; Shepherd's Lemma; Indirect Utility Function; Roy's Identity; Slutsky equation and decomposition of price effect; Properties of demand functions. Work-leisure choice; savings function, Total average and marginal Cost & Production, Consumption function, saving & investment function.	
03	<p>Simultaneous Linear Systems and Related Applications of Matrix Algebra:</p> <p>Vector spaces: algebraic and geometric properties, scalar products, norms, orthogonality; linear transformations: properties, matrix representations and elementary operations; systems of linear equations: properties of their solution sets; determinants: characterization, properties and applications.</p>	No. of Hours: 15
04	<p>Other Topics:</p> <p>Concepts of various types of series (arithmetic, geometric, logarithmic, exponential, Taylor's and McLaurin's); Brief review of trigonometric functions and associated curves.</p>	No. of Hours: 08
05	<p>Single-variable optimization</p> <p>Geometric properties of functions: convex functions, distinction between concave and convex functions; their characterizations and applications; local and global optima (maxima and minima); geometric characterizations, characterizations using calculus and applications.</p> <p>Applications: Equilibrium under cardinal utility theory; Maximization of Revenue and Profit, Minimization of cost of production in short run.</p>	No. of Hours: 20
06	<p>Multi-variable optimization</p> <p>Free and constrained optimization; Examples of constrained optimization from consumer</p>	No. of Hours: 20

and producers theories; Static and dynamic optimization problems; applications	
Applications: Equilibrium under cardinal and ordinal utility theory; Maximization of Profit in different market form, Minimization of cost of production in long run.	

Semester		II			
Course Title	Introductory Macro Economics				
Course Code	ECOACOR03T	Credit	06		
Course Outcome	<p>After successful completion of this course students will be able to:</p> <ul style="list-style-type: none"> • Understand nature, construction and measurement of key macro economic variables. • Understand the measurement of different components of national income and its importance as an indicator of human wellbeing. • Gets an idea regarding the determination of income in short run and long run with essential impacts of fiscal and monetary policy variables in different macroeconomic set up (Classical and Simple Keynesian and Complete Keynesian). 				
Scheme of Instruction					
Total Duration	90 Hours	Class/Week	04	Hours/week	04
Instruction Mode	Lecture, PPT, Chalk Board				
Scheme of Examination					

Maximum Score	75	Internal	25	End Semester	50
Course Mapping					
Units	Course Content			Lecture Hour (Cumulative)	
01	<p>Introduction to Macroeconomics and National Income Accounting</p> <p>Basic issues studied in macroeconomics; measurement of gross domestic product; income, expenditure and the circular flow; different methods of calculating NI; measurement of cost of living – CPI, GDP deflator; measuring joblessness – Unemployment rate, Unemployment and GDP – Okun’s Law; national income accounting for an open economy; balance of payments: current and capital accounts; NI as a measure of economic welfare.</p>			No. of Hours: 20	
02	<p>Money</p> <p>Functions of money; quantity theory of money; determination of money supply and demand; credit creation; tools of monetary policy.</p>			No. of Hours: 20	
03	<p>Inflation</p> <p>Inflation and its social costs; Demand Pull and Cost Push inflation; hyperinflation; anti-inflationary policies</p>			No. of Hours: 25	
04	<p>The Closed Economy in the Short Run</p> <p>Classical and Keynesian systems (difference in concepts) Simple Keynesian model of income determination, Multipliers, ISLM model; fiscal and monetary multipliers.</p>			No. of Hours: 25	

Semester		II			
Course Title	Statistical Methods for Economics I				
Course Code	ECOACOR04T	Credit	06		
Course Outcome	<p>After successful completion of this course students will be able to:</p> <ul style="list-style-type: none"> • Perceive the characteristics of sample data using various methods of statistical measurements. • Understand the comparability, consistency, spreadness /concentration among different sets of sample data. • Understand the degree and the direction of association in bivariate setup. 				
Scheme of Instruction					
Total Duration	90 Hours	Class/Week	04	Hours/week	04
Instruction Mode	Lecture, PPT, Chalk Board				
Scheme of Examination					
Maximum Score	75	Internal	25	End Semester	50
Course Mapping					
Units	Course Content			Lecture Hour (Cumulative)	
01	Basic concepts: Population and sample, parameter and statistic; Data Collection: primary and secondary data, methods of collection of primary data; Presentation of Data: Univariate frequency distribution; cumulative frequency; graphic and diagrammatic			No. of Hours: 10	

	representation of data	
02	<p>Measures of Central tendency</p> <p>The mean, median, mode and other quartiles Measures of Central Tendency: mean, median, mode; geometric mean, harmonic mean, their relative merits and demerits</p>	No. of Hours: 15
03	<p>Measures of Dispersion</p> <p>Measures of Dispersion: absolute and relative - range, mean deviation, standard deviation, coefficient of variation, quartile deviation, their merits and demerits</p>	No. of Hours: 10
04	<p>Measures of Skewness and Kurtosis:</p> <p>Interpolation and Extrapolation.</p>	No. of Hours: 10
05	<p>Bivariate frequency distribution:</p> <p>Simple Correlation: scatter diagram, sample correlation coefficient - Karl Pearson's correlation coefficient and its properties, probable error of correlation coefficient, Spearman's rank correlation coefficient, partial and multiple correlations, Regression Analysis: Properties of linear regression explained and unexplained variation regression in bivariate frequency distribution.</p>	No. of Hours: 15
06	ANOVA Tables(concepts only)	No. of Hours: 05
07	<p>Time series</p> <p>Components, measurement of trend and statistical fluctuations; Two variable linear curve fitting analysis - estimation of regression lines (Least square method) and regression coefficients - their interpretation and properties, standard error of estimate</p>	No. of Hours: 10

08	Index Numbers Price, quantity Index Numbers: Index number as weighted averages, Price and quantity index numbers, Problems in the Construction of Index Numbers, Tests for index Numbers, Chain based Index, Cost of Living Index Number, Wholesale Price Index and Cost of Living Index, Uses of Index Numbers, Index numbers as indices of wellbeing, Stock market indices.	No. of Hours: 10
09	Vital statistics Measures of crude birth rate, death rate, age sex specific birth and death rates; infant mortality rate; construction and use of life table.	No. of Hours: 05

Semester		III	
Course Title	Intermediate Micro Economics I		
Course Code	ECOACOR05T	Credit	06
Course Outcome	<p>Since students are already familiar with the basic concepts of behavior of the consumer and the producer and also covers the behavior of a competitive firm, after successful completion of this course students will be able to:</p> <ul style="list-style-type: none"> • Acquire knowledge regarding the short run and long run behavior of firms in a given demand condition under different imperfectly competitive market setup. • Understand how to determine optimal price and employment of an input in different market structures and the role of the labour union in determining wage rates. • Check whether the independent action by each economic agent is consistent while there is interdependence among the economic agents. 		

	<ul style="list-style-type: none"> Know how choice in the face of risk differs from choice in the absence of risk, how to measure and reduce risk. 				
Scheme of Instruction					
Total Duration	90 Hours	Class/Week	4	Hours/week	4
Instruction Mode	Lecture, PPT, Chalk Board				
Scheme of Examination					
Maximum Score	75	Internal	25	End Semester	50
Course Mapping					
Units	Course Content			Lecture Hour (Cumulative)	
01	Consumer Theory Revisited (i) Preference; utility; budget constraint; choice; demand (ii) Application of indifference curve approach: Derivation of labour supply and inter-temporal choice- Saving and borrowing (iii) Choice under risk: Describing Risk, Preferences towards risk, Reducing risk, the demand for Risky assets-the trade-off between Risk & Return (iv) Revealed Preference – the weak axiom and substitution effect.			No. of Hours: 25	
02	Market Structure: Perfect Competition Features, Short run and long run equilibrium of the firm, Short run supply function, Industry equilibrium; Long run industry supply			No. of Hours: 15	

	with or without external economies or diseconomies.	
03	<p>Imperfect Market Structure: Monopoly</p> <p>(i) Monopoly and anti-trust policy; government policies towards competition; Sources of monopoly power, Index of monopoly power.</p> <p>(ii) Equilibrium with single plant, multiple plants, Constrained revenue maximization, Natural monopoly; Dead-weight loss of Monopoly</p> <p>(iii) Price discrimination; peak-load pricing; bundling; two-part tariff.</p> <p>(iv) Monopsony.</p>	No. of Hours: 40
04	<p>Imperfect Market Structure: Monopolistic Competition</p> <p>Concept: Product diversification; Short-run & Long-run equilibrium; Excess Capacity.</p>	No. of Hours: 10

Semester		III	
Course Title	Intermediate Macro Economics I		
Course Code	ECOACOR06T	Credit	06
Course Outcome	<p>This course is a sequel to Macroeconomics I. After successful completion of this course students will be able to:</p> <ul style="list-style-type: none"> • various alternative theories of output and employment determination in a closed economy in the short run as well as medium run, and the role of policy in this context. • Understand the microeconomic foundation of various aggregative concepts used in the previous course. 		

	<ul style="list-style-type: none"> Understand the causes and effects of different types of inflation and inflation- unemployment tradeoff in an economy. 				
Scheme of Instruction					
Total Duration	90 Hours	Class/Week	04	Hours/week	04
Instruction Mode	Lecture, PPT, Chalk Board				
Scheme of Examination					
Maximum Score	75	Internal	25	End Semester	50
Course Mapping					
Units	Course Content			Lecture Hour (Cumulative)	
01	The classical system The Classical view of macroeconomics in respect of the determination of employment output and prices. Say's law and Walras' law – The dichotomy between the real sector and monetary sector – neutrality of money.			No. of Hours: 20	
02	The Complete Keynesian model <ul style="list-style-type: none"> Derivation of aggregate demand and aggregate supply curve – Keynesian labour supply function – determination of equilibrium – wage rigidity – involuntary unemployment – Underemployment equilibrium – effects of change in money supply and other factors on complete Keynesian model – money illusion. Comparison with the Classical system – price 			No. of Hours: 25	

	flexibility – Real balance effect.	
03	<p>Inflation, Unemployment and Expectations (i) Phillips curve; adaptive and rational expectations; policy ineffectiveness debate.</p> <p>(ii) Aggregate supply and Phillips curve; Inflation, unemployment and Phillips curve, Shift of Phillips curve, Disinflation and sacrifice ratio.</p>	No. of Hours: 25
04	<p>Open Economy Models</p> <p>Short-run open economy models; Mundell-Fleming model; exchange rate determination; purchasing power parity; asset market approach; Dornbusch's overshooting model; monetary approach to balance of payments; international financial markets.</p>	No. of Hours: 20

Semester		III	
Course Title	Mathematical Methods for Economics II		
Course Code	ECOACOR07T	Credit	06
Course Outcome	<p>After going through the course, the students will be able to</p> <ul style="list-style-type: none"> • Understand the basic mathematics that enables the creation of economic theory in general. • Understand the application of mathematical techniques to economic theory specifically the courses on microeconomic theory, macroeconomic theory, statistics and econometrics set out in this Syllabus. • Understand the application of linear Programming Problems, interdependence industry relation and game theory. • In this course, particular economic models are not the ends, but the means for illustrating the specific methods of applying mathematical techniques to 		

	economic theory.				
Scheme of Instruction					
Total Duration	85	Class/Week	4	Hours/week	4
Instruction Mode	Lecture, PPT, Chalk Board				
Scheme of Examination					
Maximum Score	75	Internal	25	End Semester	50
Course Mapping					
Units	Course Content			Lecture Hour (Cumulative)	
01	Multi-variable function: some concepts Convex sets; geometric properties of convex functions, their characterizations, properties and applications; quasi-convex functions, their characterizations, properties and applications; the implicit function; homogeneous and homothetic functions: characterizations and application to comparative statics problems: Maximum (and Minimum) Value Functions; Envelope Theorem; Shadow prices; envelope theorem and applications.			No. of Hours: 15	
02	Classical Optimization First Order condition for optimum; Second Order Condition and sufficiency requirement; Local and Global Optima and Local-Global Theorem; Constraint qualification and Kuhn Tucker condition; Lagrangean Technique for optimization and its interpretation.			No. of Hours: 15	

03	<p>Linear Programming and Duality</p> <p>Basic concepts and solution methods (graphical and simplex); Duality theorem.</p> <p>Applications: Duality in Consumer Theory; Producer's Theory: Wong-Viner Theorem;</p> <p>Properties of cost functions.</p>	No. of Hours: 15
04	<p>Simultaneous Equation Systems:</p> <p>Systems of linear equations: properties of their solution sets; determinants: characterization, properties and applications. Linear and non-linear simultaneous systems. Eigen Values, Eigenvectors and Jacobean Transformations.</p> <p>Applications: Simple Linear Input-Output models with fixed coefficients and their Solutions (open and closed model). Two good general equilibrium systems: existence of equilibrium, and comparative statics.</p>	No. of Hours: 15
05	<p>Dynamical Methods: algebraic and geometric exposition.</p> <p>Single Equation linear Difference and Differential equations systems: Monotonic and oscillatory convergence, divergence and Lyapunov stability.</p> <p>Applications: Cobweb models. Simple small open economy trade models, and the existence of equilibrium and comparative statics</p>	No. of Hours: 15
06	<p>Game Theory and its Applications</p> <p>Constant and non-constant sum game, two persons zero sum game, concept of pure strategy and mixed strategy, Nash</p>	No. of Hours: 10

equilibrium method and method of dominance.	
Application:Cournot model, problem of prisoner's dilemma.	

Semester		IV			
Course Title	Intermediate Micro Economics II				
Course Code	ECOACOR08T	Credit		06	
Course Outcome	<p>This course is a sequel to Intermediate Microeconomics I, After successful completion of this course students will be able to:</p> <ul style="list-style-type: none"> • Have conceptual clarity to the student coupled with the use of mathematical tools and reasoning. • Know the strategic behavior oligopolistic firms • Understand market failure • Learn about general equilibrium and welfare, imperfect markets and topics under information economics. 				
Scheme of Instruction					
Total Duration	90	Class/Week	04	Hours/week	04
	Hours				
Instruction Mode	Lecture, PPT, Chalk Board				
Scheme of Examination					

Maximum Score	75	Internal	25	End Semester	50
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Course Mapping

Units	Course Content	Lecture Hour (Cumulative)
01	<p>Market Structure: Oligopoly and Strategic Behavior of Firms</p> <p>Conjectural Variation & Reaction functions, Analysis of Cournot & Stackelberg; Collusive Oligopoly & Prisoners' dilemma in cartel stability, Nash equilibrium of game.</p>	No. of Hours: 30
02	<p>Market Failure</p> <p>Externalities; public goods and markets with asymmetric information-Moral hazard and adverse selection (concepts only)-Market for Lemons</p>	No. of Hours: 20
03	<p>Input Markets</p> <p>Derived demand for a single input & multiple input in competitive & imperfectly competitive markets, Firm demand & industry demand, Adding up problem, Collective bargaining & exploitation, Rent & Quasi-rent.</p>	No. of Hours: 20
04	<p>General Equilibrium, Efficiency and Welfare</p> <p>Equilibrium and efficiency under pure exchange and production; Conditions of Pareto optimality; overall efficiency and welfare economics.</p>	No. of Hours: 20

Semester		IV
Course Title	Intermediate Macro Economics II	

Course Code	ECOACOR09T	Credit	06
Course Outcome	<p>This course is a sequel to Intermediate Macroeconomics I and after successful completion of this course students will be able to:</p> <ul style="list-style-type: none"> • Have an idea about the long run dynamic issues like growth and technical progress. • Also gather knowledge about the micro-foundations to the various aggregative concepts used in the previous course. 		
Scheme of Instruction			
Total Duration	90 Hours	Class/Week	04 Hours/week
Instruction Mode	Lecture, PPT, Chalk Board		
Scheme of Examination			
Maximum Score	75	Internal	25 End Semester 50
Course Mapping			
Units	Course Content	Lecture Hour (Cumulative)	
01	<p>Economic Growth</p> <p>Harrod-Domar model; Solow model; golden rule; technological progress and elements of endogenous growth.</p>	No. of Hours: 25	
02	<p>Microeconomic Foundations</p> <p>a. Consumption: Keynesian consumption function; Fisher's theory of optimal intertemporal choice; life-cycle, Duesenberry's relative income hypothesis and permanent income hypotheses; rational expectations and random-walk of consumption expenditure.</p>	No. of Hours: 50	

	<p>b. Investment: determinants of business fixed investment; residential investment and inventory investment. Tobin's q, Accelerator model of investment.</p> <p>c. Demand for money: Transaction demand for money, Precautionary demand for money, Speculative demand for money, The Regressive Expectations Model, The portfolio balance approach, The Baumol-Tobin models of Cash Management, Money as a consumer's and producer's good.</p>	
03	<p>Schools of Macroeconomic Thoughts Mercantilism, Physiocracy, Classicals; Keynesians; New-Classicals and New-Keynesians.</p>	No. of Hours: 15

Semester		IV	
Course Title	Statistical Methods for Economics II		
Course Code	ECOACOR10T	Credit	06
Course Outcome	<p>After successful completion of this course students will be able to:</p> <ul style="list-style-type: none"> • Learn conception and definitions of various statistical terms, rules and theorems along with the application of various univariate probability distribution functions. • Learn about probability distributions of discrete and continuous random variables and of joint distributions. • Gather experience how to select samples from a population and discussion on sampling techniques used to collect survey data. • Learn basic concepts and terminology that are fundamental to statistical analysis and inference. • Learn how to draw inferences about an unknown population with the help of sample observations. 		

Scheme of Instruction					
Total Duration	75	Class/Week	03	Hours/week	03
Instruction Mode	Lecture, PPT, Chalk Board				
Scheme of Examination					
Maximum Score	75	Internal	25	End Semester	50
Course Mapping					
Units	Course Content			Lecture Hour (Cumulative)	
01	Introduction and Overview The distinction between populations and samples, between population parameters and sample statistics; measures to describe and summarize data; population moments and their sample counterparts			No. of Hours: 10	
02	Elementary Probability Theory Random variable, Sample spaces and events; probability axioms and properties; counting techniques; Permutations and Combinations; conditional probability and Bayes' rule; independence			No. of Hours: 15	
03	Random Variables and Probability Distributions Defining random variables; probability distributions; properties of discrete and continuous distributions, expected values of random variables; Concepts of some special distributions (Uniform distribution; Binomial and related Distributions; Poisson, Normal and			No. of Hours: 15	

	Bivariate Normal distributions; Beta, Chi-Square, t and F Distributions), Transformations of variables: discrete and continuous types, Expectations of functions of random variable.	
04	Random Sampling and Jointly Distributed Random Variables Properties of distribution functions, mass functions and density functions for jointly distributed random variables; Computation of expected values; covariance and correlation coefficients.	No. of Hours: 15
05	Sampling (a) Principal steps in a sample survey; methods of sampling; the role of sampling theory; (b) Distributions of sample mean and sample variance, properties of random samples.	No. of Hours: 10
06	Introduction to statistical Inference Point and Interval Estimation, properties of estimators; confidence intervals for population parameters, Estimation of population parameters using methods of moments and maximum likelihood procedures;	No. of Hours: 15

Semester		V	
Course Title	Introductory Econometrics		
Course Code	ECOACOR11T	Credit	06
Course Outcome	After successful completion of this course students will be able to: <ul style="list-style-type: none"> • Know about comprehensive introduction to 		

	basic econometric concepts and techniques. <ul style="list-style-type: none"> • Have idea on statistical concepts of hypothesis testing, • Know about estimation and diagnostic testing of simple and multiple regression models. • Also the consequences of and tests for misspecification of regression models. 				
Scheme of Instruction					
Total Duration	85	Class/Week	04	Hours/week	04
Instruction Mode	Lecture, PPT, Chalk and Board				
Scheme of Examination					
Maximum Score	75	Internal	25	End Semester	50
Course Mapping					
Units	Course Content			Lecture Hour (Cumulative)	
01	Classical Statistical Inference: Basic concepts of Estimation: Desirable properties of estimators-unbiasedness, Minimum Variance-Simple methods of point Estimation-Maximum Likelihood, Estimators and their properties Testing of hypothesis: Confidence intervals-Testing of Hypothesis- p-values- Type-I and Type-I errors- Simple applications of tests for the mean and variance of univariate Normal Population. Non-parametric tests.			No. of Hours: 20	
02	Linear Regression: Specifications of the model- Assumptions- Ordinary Least Squares (OLS) Estimation-Gauss			No. of Hours: 20	

	<p>Markov Theorem- Estimation of the Error Variance- Statistical Inference in the Linear Regression Model- Confidence Intervals for the Estimated Parameters and the Testing of Hypotheses- Coefficient of Determination- Prediction with the Simple Regression model.</p>	
03	<p>Problems in OLS Method:</p> <p>Violation of assumptions and simple least-squares methods in two variable linear regression models: Analysis of Residuals and consequences of applying OLS under autocorrelation, heteroscedasticity, test of autocorrelation and heteroscedasticity, multicollinearity problem, consequences and testing.</p>	No. of Hours: 20
04	<p>Multiple Regression with qualitative information:</p> <p>Describing qualitative information, single and multiple dummy independent variables, interaction of dummy independent variables, A binary Dependent variable: the linear probability model.</p>	No. of Hours: 20
05	<p>Specification Analysis:</p> <p>Omission of a relevant variable; inclusion of irrelevant variable; tests of specification errors.</p>	No. of Hours: 05

Semester		V	
Course Title	Development Economics		
Course Code	ECOACOR12T	Credit	06

Course Outcome

After successful completion of this course students will be able to:

- Understand alternative conception of development and their justification.
- Learn about various stages of growth along with various theories and models and strategy of growth.
- Understand the basic demographic concepts and their evolution during the process of development along with various theories and model explaining the problems of a labour surplus economy
- Learn different measures of poverty and inequality and explore the connection between growth and inequality.
- Link the issues and strategies related with economic development and the question of sustainable development.
- Understand how trade causes economic development for Less Developed Countries (LDCs), particularly with reference to the issues of Balance of Payment, economic dependency of LDC in terms of different theories.
- Understand the arguments in favor of protection and how different types of trade protectionist measures affect social welfare of LDCs.
- Interpret how inflow of foreign capital in terms of Multi National Corporations (MNCs) affects the economic development of host LDCs.
- Explore the debate between state and market in solving the fundamental economic problems of an economy and how they address the issue of social welfare.
- Understand the development of different International Financial Institutions like IMF, World Bank, WTO etc. and their functioning with special reference to LDCs.

Scheme of Instruction					
Total Duration	90 Hours	Class/Week	04	Hours/week	04
Instruction Mode	Lecture, PPT, Chalk and Board				
Scheme of Examination					
Maximum Score	75	Internal	25	End Semester	50
Course Mapping					
Units	Course Content			Lecture Hour (Cumulative)	
01	Basic concepts of development Different concepts of development –Sustainable development, Participatory development, Inclusive development, Human development, Growth and Development– Broad Indicators of Economic Development– Per capita Income– Human Development Index– Gender Development Index– Gender Empowerment Measure– Human Poverty Index. International variations in development measures; Comparing development trajectories across nations and within them. Dependency school of development. Theory of unequal exchange and development.			No. of Hours: 25	
02	Persistence of Underdevelopment and Strategies of Development Characteristics of underdevelopment – Obstacles to underdevelopment – Trap Models – Vicious circle of poverty – Critical minimum effort thesis			No. of Hours: 30	

	<p>– Low level equilibrium trap –Process of cumulative causation – Big push argument targeting the big push-balanced vs.unbalanced growth; Hirschman model, Choice of technique and investment criteria, Conceptof surplus labour – Surplus labour as potential saving – Economic development withunlimited supplies of labour (Lewis Model). Harris-Todaro model.</p>	
03	<p>Poverty and Inequality</p> <p>Meaning of inequality, Inequality measures: Lorenz Curve, Range, Coefficient of variation,Gini-coefficient, Poverty, relative and absolute deprivation with respect to income, Povertyline, Poverty measures – Head count ratio, Poverty gap ratio, Income gap ratio, HumanPoverty Index, hunger index etc.. Tackling Poverty – The World Bank Approach</p>	No. of Hours: 20
04	<p>Globalization</p> <p>Globalization in historical perspective- Brettonwoods and its after math. The economics andpolitics of multilateral agreements; trade, production patterns and world inequality; financialinstability in a globalized world.</p>	No. of Hours: 15

Semester		VI
Course Title	Indian Economy	

Course Code	ECOACOR13T	Credit	06
Course Outcome	<p>After going through the course, the students will be able to</p> <ul style="list-style-type: none"> • Basic characteristics of Indian economy with Growth and distribution, sustainability and regional contrasts; structural change, savings and investment. • Evaluate how the structure of Indian economy has changed in the planning era. • Understand the key economic issues related to Indian agriculture, industry, unemployment and poverty in both pre and post reform periods and their policy relevance. • Understand the rational and major objectives of India's Five Year Plans, how the emphasis of these objectives has changed over time and recent developments. • Examine the changes in the policies of the Government in pre and post reform periods in the fields of money and capita market, public economics and external sectors. 		
Scheme of Instruction			
Total Duration	90 Hours	Class/Week	04 Hours/week
Instruction Mode	Lecture, PPT, Chalk and Board		
Scheme of Examination			
Maximum Score	75	Internal	25 End Semester 50
Course Mapping			
Units	Course Content	Lecture Hour (Cumulative)	
01	<p>Economic Development since Independence</p> <p>Major features of the economy at independence; Structural constraints; Economic planning-</p>	No. of Hours: 30	

	Evolution of Indian Planning and its development goals and strategies: Debates between Growth and distribution, Public sector vs. Private sector, Consumer goods vs. Capital goods, Import substitution vs. Export promotion ; growth and development under different policy regimes— goals, constraints, institutions and policy framework; an assessment of performance— sustainability and regional contrasts; structural change, savings and investment.	
02	Population and Human Development Demographic trends and issues; education; health and malnutrition.	No. of Hours: 15
03	Growth and Distribution Trends and policies in poverty; inequality and unemployment. Indian growth pattern in postliberalization era.	No. of Hours:20
04	Macroeconomic Policies and Their Impact Fiscal Policy; trade and investment policy; financial and monetary policies; labour policy	No. of Hours:25

Semester		VI	
Course Title	International Economics		
Course Code	ECOACOR14T	Credit	06
Course Outcome	<p>On successful completion of this course students will be able to:</p> <ul style="list-style-type: none"> Understand the basis of trade between nations of the world, the notion of terms of trade and how free trade can be mutually beneficial for the trading nations in terms of the Classical and Neo-Classical theories of 		

	<p>trade by exploring the idea of comparative cost advantage,</p> <ul style="list-style-type: none"> • Evaluate the relationship between country size and gains from trade and how trade affects distribution of factor income among the trading nations • Be familiar with, and be able to critically analyze the main arguments for protection and be able to critically evaluate the relevance and realism of arguments for free trade, taking into account the costs and benefits of different trade policy measures like tariff, quota, voluntary export restraints, export subsidy etc. on economic welfare of the nation • Explain how international flow of goods, services and capital affects foreign exchange reserve as well as foreign exchange rate of a nation and how expenditure adjustment and expenditure switching trade policies help a nation to achieve both internal and external balance. 				
Scheme of Instruction					
Total Duration	90 Hours	Class/Week	04	Hours/week	04
Instruction Mode	Lecture, PPT, Chalk and Board				
Scheme of Examination					
Maximum Score	75	Internal	25	End Semester	50
Course Mapping					
Units	Course Content			Lecture Hour (Cumulative)	
01	International Trade: Ideas and Concepts a. What is International Economics all about?- Meaning and scope of International Economics- Arbitrage as basis and direction of International Trade – difference between international trade and			No. of Hours:30	

	<p>international trade.</p> <p>b. Concept of Absolute advantage and comparative advantage; externalities, regulation and perverse comparative advantage;</p> <p>c. International Equilibrium: Derivation of Offer Curve using TIC and Trade Triangle- TOT-Equilibrium with TIC-Stability of Offer Curve- Offer Curve under constant Opportunity Cost Condition</p> <p>d. Gains from Trade: Concept (and significance of shape) of PPF- Decomposition ofGFT- Production and Exchange Gain-Substitution possibilities and magnitude ofGFT. Exceptional cases where there is only one of the gains or even no gain.</p>	
02	<p>Theories of International Trade</p> <p>a. Technology and Trade: Ricardian Theory of Trade in two-country two-commodityframework-Multi-commodity and two-country framework-Complete Specializationand indeterminacy of TOT-Limitation of Ricardian Trade Theorem.</p> <p>b. Factor Endowment and Trade: Hecksher-Ohlin Theorem of Trade using Price and Physical definition-Factor Price Equalization Theorem-Rybszynsky Theorem-StolperSamuelson Theorem-Demand Bias and H-O Theorem, Factor Intensity Reversal andH-O Theorem-Leontief Paradox, Effects of trade on factor price and incomedistribution, factor price equalization, factor intensity reversal & factor priceequalization.</p> <p>c. New trade theories- i) Intra industry trade policy model-Krugman Model(1979),ii)strategic trade policy model-Brander and Spencer's</p>	No. of Hours:25

	model(1985) ; the international allocation of production; firms in the global economy — outsourcing and multinational enterprises.	
03	<p>Trade Policy</p> <p>Effect of Instruments of Trade Policy: Effect of imposition of Tariff in partial equilibrium framework for small and large country , Quota, Quota- Tariff equivalence & nonequivalence, effects of tariff, quota, subsidy and voluntary export restraint; Effect of Export Subsidy in partial equilibrium framework for small country, General Equilibrium Analysis distinction between large and small economy, welfare effects of a tariff on small country and large country, Offer curve and ToT, Tariff ridden offer curve, Tariff war, Optimum tariff for large economy, Metzler's Paradox.</p>	No. of Hours:20
04	<p>Balance of Payment:</p> <p>a. Balance of Payment accounts in an open economy; Determination of National Income, Transfer problem, Introduction of foreign Country & repercussion effect - open economy multiplier with & without repercussion effect;</p> <p>b. Fixed & Flexible Exchange Rate: adjustment of demand and supply of Foreign Exchange, Effect of devaluation,</p> <p>c. Pegged Exchange Rate and BoP: Expenditure Switching Policy (Elasticity Approach) and Expenditure Reducing Policy (Absorption Approach)-Synthesis Approach.</p> <p>d. Effects of exchange rate on domestic prices and ToT, Marshall-Lerner Condition, J-Curve effect.</p>	No. of Hours:15

Semester		V			
Course Title	Applied Econometrics (DSE)				
Course Code	ECOADSE01T	Credit	06		
Course Outcome	<p>On successful completion of this course students will be able to:</p> <ul style="list-style-type: none"> • have hands on experience in data collection and data entry, analysis of data in terms of charts, diagrams both for primary and secondary data • statistical measures through computers using statistical software • prepare students to handle data and project reporting using different tools of computers (excel, word, power point) 				
Scheme of Instruction					
Total Duration	90 Hours	Class/Week	04	Hours/week	04
Instruction Mode	PPT, Chalk and Board, Interactive Method, Video Lecture.				
Scheme of Examination					
Maximum Score	75	Internal	25	End Semester	50
Course Mapping					
Units	Course Content			Lecture Hour (Cumulative)	

01	<p>Stages in Empirical Econometric Research</p> <p>Research Methodology</p>	No. of Hours:10
02	<p>Essential steps in Primary data collection</p> <p>Problem selection, designing of questionnaire, sample design, pre-testing of questionnaire for collection of primary data, introduction to secondary data sources.</p>	No. of Hours:15
03	<p>Application of Statistics</p> <p>Estimation of descriptive statistics: mean, median, mode, standard deviation, simple correlation, rank correlation. Graphical representation of data sets: pie-chart, bar chart, linear and nonlinear curve fitting. Introduction to probability theory, random sampling using random number, Testing of hypothesis.</p>	No. of Hours:20
04	<p>Application of Econometrics</p> <p>Linear regression model and test for linear restriction on parameters test of heteroscedasticity, Autocorrelation, multicollinearity, application of dummy variable models. Interpretation: Estimated parameters; goodness of fit - R² and adjusted R²; partial regression</p> <p>Coefficients; testing hypotheses – individual and joint.</p>	No. of Hours:20
05	<p>Dummy variables, dummy variable for changes in intercept term, slope coefficient, dummy variable trap, dummy variables for testing in the regression coefficient.</p>	No. of Hours:10
06	<p>Introduction to Econometric Software Package</p> <p>SPSS; E-VIEWS; STATA (any one)</p>	No. of Hours:15

Semester		V			
Course Title	Economics of Health and Education (DSE)				
Course Code	ECOADSE03T	Credit	06		
Course Outcome	<p>On successful completion of this course students will be able to:</p> <ul style="list-style-type: none"> • Understand the importance of education and health in improving well-being (as per the Millennium Development Goals, othergoals), • Have idea on status of primary education, child mortality, maternal health and combatingdiseases. • Have idea on microeconomic framework to analyze, among other things, individual choice in the demand for health andeducation, • Have idea on government intervention and aspects of inequity and discrimination in bothsectors • Have an overview of health and education inIndia. 				
Scheme of Instruction					
Total Duration	90 Hours	Class/Week	04	Hours/week	04
Instruction Mode	PPT, Chalk and Board, Interactive Method				
Scheme of Examination					
Maximum Score	75	Internal	25	End Semester	50
Course Mapping					

Units	Course Content	Lecture Hour (Cumulative)
01	<p>Role of Health and Education in Human Development</p> <p>Importance in poverty alleviation, health and education outcomes and their relationship with macroeconomic performance.</p>	No. of Hours:15
02	<p>Microeconomic Foundations of Health Economics</p> <p>Demand for health, uncertainty and health insurance market, alternative insurance mechanisms, market failure and rationale for public intervention; equity and inequality.</p>	No. of Hours:15
03	<p>Evaluation of Health Programs</p> <p>Costing, cost effectiveness and cost-benefit analysis; burden of disease.</p>	No. of Hours:15
04	<p>Health Sector in India: An Overview</p> <p>Health outcomes, health systems, health financing.</p>	No. of Hours:15
05	<p>Education: Investment in Human Capital</p> <p>Rate of return to education: private and social; quality of education; signaling or human capital; theories of discrimination; gender and caste discrimination in India.</p>	No. of Hours:15
06	<p>Education Sector in India: An Overview</p> <p>Literacy rates, school participation, school quality measures.</p>	No. of Hours:15

Semester	VI
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Course Title	Financial Economics (DSE)				
Course Code	ECOADSE05T	Credit	06		
Course Outcome	On successful completion of this course students will be able to <ul style="list-style-type: none"> • Understand the economics of finance. • Have idea on some of the basic models used to benchmark valuation of assets and derivatives are studied in detail; Know the Option Pricing models and brief idea to corporate finance. 				
Scheme of Instruction					
Total Duration	90 Hours	Class/Week	04	Hours/week	04
Instruction Mode	PPT, Chalk and Board, Interactive Method				
Scheme of Examination					
Maximum Score	75	Internal	25	End Semester	50
Course Mapping					
Units	Course Content			Lecture Hour (Cumulative)	
01	Investment Theory and Portfolio Analysis a. 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; immunisation; b. Single-period random cash flows			No. of Hours:25	

	<p>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; risk-free assets and the one-fund theorem.</p> <p>c. CAPM</p> <p>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.</p>	
02	<p>Options and Derivatives</p> <p>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.</p>	No. of Hours:20
03	<p>Corporate Finance</p> <p>a. Patterns of corporate financing: common stock; Concepts of primary market and secondary market; debt and common equity - a very brief discussion of advantages and disadvantages associated with each type of instrument due to asymmetric information and agency problems- other instruments: preference shares; preferences; convertibles; Capital structure and the cost of capital; corporate debt and dividend policy; the Modigliani-Miller theorem.</p>	No. of Hours:45

	<p>b. Evolution of limited liability companies; alternative sources of fund for a firm.</p> <p>c. Financial Statement analysis: Basic accounting concepts, how to read balance sheets, profit and loss accounts and cash flow statements. Ratio analysis.</p> <p>d. Capital structure & Cost of capital.</p> <p>e. Application to corporate finance: Net present value and capital budgeting.</p> <ul style="list-style-type: none"> • Credit spread • Term structure of interest rates 	
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Semester		VI			
Course Title	Project/ Dissertation (DSE)				
Course Code	ECOADSE02P	Credit		06	
Course Outcome	<p>On successful completion of this course students will have idea on</p> <ul style="list-style-type: none"> • presenting small research work on a specified manner • different contemporary socio-economic issues by applying research methodology, • process of data presentation and economic analysis, preparation of dissertation using statistical and simple econometric tools, • Prepare the students for concise form of presentation in their future academic and job assignments. 				
Scheme of Instruction					
Total Duration	90	Class/Week	04	Hours/week	04

	Hours				
Instruction Mode	PPT, Chalk and Board, Interactive Method				
Scheme of Examination					
Maximum Score	75	Internal	25	End Semester	50
Course Mapping					
Units	Course Content			Lecture Hour (Cumulative)	
	<p>The course is aimed at providing students the scope to develop the skill of taking up independent analytical research project where they can learn how to select a real life problem, transform the problem into a research question and to apply an analytical framework based on theories learnt and use quantitative tools and problem designing skill. The students are supposed to come up with a conclusive answer to the research question. Finally a report will have to be submitted by the student. This exercise is expected to enhance analytical skill of the students.</p>			No. of Hours:90	
Semester			III		
Course Title	Survey Methodology (SEC-I)				

Course Code	ECOSSEC001	Credit	02		
Course Outcome	Students get the idea on Process of survey after completion of this course.				
Scheme of Instruction					
Total Duration	50 Hours	Class/Week	02	Hours/week	02
Instruction Mode	PPT, Chalk and Board, Interactive Method, Practical Survey				
Scheme of Examination					
Maximum Score	25	Internal	25	End Semester	00
Course Mapping					
Units	Course Content	Lecture Hour (Cumulative)			
01	Introduction, Inference and Error in Surveys Introduction to survey methodology; Steps of the process of a survey, Examples of Large-Scale Survey Instruments, Introducing the Concepts of Validity and Reliability, Sources of Error: Sampling and Measurement, Different Theories of Measurement	No. of Hours:10			
02	Sampling in Survey Research Being Clear about the Population of Interest, Developing a Sampling Frame, Probability sampling; Simple Random and Systematic sampling; Stratification, Cluster and	No. of Hours:10			

	<p>multistage sampling; Other probability designs, Sampling frames; Selection weights; Computing sampling errors, Examples of sample designs</p>	
03	<p>Mode of Data Collection</p> <p>Face-to-face, Telephone, Self-administered, and Administrative records, Methods of computer assisted data collection; Impact on survey errors, Web surveys, Overview of response behavior; Comprehension; Memory search, Estimation and judgment; Delivery of response.</p>	No. of Hours:10
04	<p>Nonresponse</p> <p>Contacting sample units; Gaining the cooperation of sample units, Monitoring the progress of data collection; Response rates</p>	No. of Hours:10
05	<p>Post-Survey Processing; Estimation (Lepkowski)</p> <p>Lecture: Editing data; Coding; Imputation; Construction of unit weights, Variance estimation; Analysis of survey data</p>	No. of Hours:10

Semester		IV	
Course Title	Indian Official Statistics (SEC-II)		
Course Code	ECOSSEC002	Credit	02
Course Outcome	Students get the idea on economic census, sources of demographic data and international statistical system.		

Scheme of Instruction					
Total Duration	50 Hours	Class/Week	02	Hours/week	02
Instruction Mode	PPT, Chalk and Board, Interactive Method				
Scheme of Examination					
Maximum Score	25	Internal	25	End Semester	00
Course Mapping					
Units	Course Content			Lecture Hour (Cumulative)	
01	Introduction What is Official Statistics? Methods of Collecting Official Statistics, Aims and Objectives, Indian Statistical System: Main functions of Statistical System in Indian, Institutional Framework- Official Organizations for collecting/compiling/publishing national/state level data on different variables			No. of Hours:15	
02	Economic Census Economic Statistics, Population Statistics, Employment Statistics, Agriculture Statistics, Financial Statistics - Main Publications, Who collects - Periodicity and Features			No. of Hours:15	
03	Sources of demographic data - Registration of Vital events. Rates and ratios. Measures of mortality. Measures of fertility and Reproduction. Use of demographic data for policy formulation.			No. of Hours:10	

04	International Statistical System: Comparison of major macro variables – NationalIncome/GDP. Selected topics from: Purchasing power parity; Indicators relating to Energy,environment, Gender, Industry, National accounts, Social Statistics and Trade.	No. of Hours:10
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