DEPARTMENT OF ECONOMICS

ACADEMIC CALENDAR (STUDY PLAN) 2023-2024

Faculty:
SS -Dr. Sanchita Sen (Associate Professor)
SRC - Dr. Sarthak Roy Chowdhury (Assistant Professor)
PR – Smt. Priti Rajak (Assistant Professor)
AB1 – Smt. Arjama Banerjee (SACT)
AB2 – Smt. Arpita Bose (SACT)

ECONOMICS HONOURS (MAJOR) FIRST YEAR SEMESTER I (July'23 to Dec'23) NEP

Economics Core Course I: ECON-H-CC1-1-Th Microeconomics I			
Units	**Topic**	**No. of Lectures (Hr)**	**Faculty**
Unit 1:Exploring the subject matter of Economics	Unit 1: Scope and Method of Economics Scope and Method of Economics: Wants, Scarcity, Competing Ends and Choice - Defining Economics, Thinking like an economist: Basic Economics Questions, Households and firms, Demand and Supply, Basic concepts of Utility, basic concepts of production-Production function, Definition of Average and Marginal Product, Microeconomics and Macroeconomics, Normative Economics and Positive Economics -	2	AB1 AB2
	Unit 1.2: Principles of Microeconomics - principles of individual decision making and principles of economic interactions – trade off, opportunity cost, efficiency, marginal changes and cost-benefit, trade, market economy, property rights, market failure, externality and market power	2	SRC
	Unit 1.3: Interdependence and the Gains from Trade- production possibilities frontier and increasing costs, absolute and comparative advantage, comparative advantage and gains from trade	1	SRC
Unit 2: Utility Theory (Focus on intuitive explanation and diagrams. Learning to analyze without using calculus a must)	2.1 2.1 Cardinal and Ordinal Approach	20	SRC
	2.2 Utility in Cardinal Approach- Utility and choice, Total Utility and Marginal Utility, Utility and choice-maximization, marginal utility, Theory of demand		
	2.3 Ordinal utility: Assumptions on preference ordering, Indifference curve (IC), Marginal rate of substitution and convexity of IC, Budget constraint, Consumers 'equilibrium-interior		

	and corner,		
Unit 3: Demand and Supply: How Markets Work	3.1 Elementary theory of Demand: Factors influencing household demand and market demand, the demand curve, movement along and shift of the demand curve 3.2 Elementary theory of Supply: factors influencing supply, the supply curve, movement along and shift of the supply curve 3.3 The Elementary theory of market price: Determination of equilibrium price in a competitive market.	8	SRC
Unit 4: Market and Adjustments	4.1 The Evolution of Market Economies, Price System and the Invisible Hand	1	SS
	4.2 The Decision-takers - households, firms and central authorities 4.3 The Concepts of Markets- individual market, separation of individual markets, interlinking of individual markets. Difference among markets- competitiveness, goods and factor markets, free and controlled markets. Market and non-market sectors, public and private sectors, economies- free market, command and mixed. 4.4 Different goods: Public goods, Private goods, Common resources and Natural Monopolies.	3	PR
Unit 5: Market Sensitivity and Elasticity	5.1 Importance of Elasticity in Choice-Decisions 5.2 Method of Calculation- Arc Elasticity, Point Elasticity-definition 5.3 Demand and supply Elasticities-types of elasticity and factors affecting elasticity, Demand Elasticity and Revenue, Long run and Short run elasticities of Demand and Supply 5.4 Income and Cross Price Elasticity 5.5 Applications: Case studies – OPEC and Oil Price	8	SS

Economics Core Course I: ECON-H-CC1-1-Tu
Microeconomics (I)
Marks: 25 Credit: 1
No. of Lecture hours (Tu): 15 [For Semester-I]
Mode of tutorial Examination: Viva or Presentation plus viva
Tutorial contact hours: 15 [for Revision, Doubt Clearing, Solving Problems.

ECONOMICS MINOR COURSE I for FIRST SEMESTER (July'23 to Dec.'23)

Economics Minor Course I: ECON-H-CC1-1-Th Microeconomics I			
Units	**Topic**	**No. of Lectures (Hr)**	**Faculty**
Unit 1:Exploring the subject matter of Economics	Unit 1: Scope and Method of Economics Scope and Method of Economics: Wants, Scarcity, Competing Ends and Choice - Defining Economics, Thinking like an economist: Basic Economics Questions, Households and firms, Demand and Supply, Basic concepts of Utility, basic concepts of production-Production function, Definition of Average and Marginal Product, Microeconomics and Macroeconomics, Normative Economics and Positive Economics -	2	AB1 AB2
	Unit 1.2: Principles of Microeconomics - principles of individual decision making and principles of economic interactions – trade off, opportunity cost, efficiency, marginal changes and cost-benefit, trade, market economy, property rights, market failure, externality and market power	2	SRC
	Unit 1.3: Interdependence and the Gains from Trade- production possibilities frontier and increasing costs, absolute and comparative advantage, comparative advantage and gains from trade	1	SRC
Unit 2: Utility Theory (Focus on intuitive explanation and diagrams. Learning to analyze without using calculus a must)	2.1 2.1 Cardinal and Ordinal Approach	20	SRC
	2.2 Utility in Cardinal Approach- Utility and choice, Total Utility and Marginal Utility, Utility and choice-maximization, marginal utility, Theory of demand		
	2.3 Ordinal utility: Assumptions on preference ordering, Indifference curve (IC), Marginal rate of substitution and convexity of IC, Budget constraint, Consumers 'equilibrium-interior and corner,		
Unit 3: Demand and Supply: How Markets Work	3.1 Elementary theory of Demand: Factors influencing household demand and market demand, the demand curve, movement along and shift of the demand curve 3.2 Elementary theory of Supply: factors influencing supply, the supply curve, movement along and shift of the supply curve 3.3 The Elementary theory of market price: Determination of equilibrium price in a competitive market.	8	SRC
Unit 4: Market and	4.1 The Evolution of Market Economies, Price System and the Invisible Hand	1	SS

Adjustments	4.2 The Decision-takers - households, firms and central authorities 4.3 The Concepts of Markets- individual market, separation of individual markets, interlinking of individual markets. Difference among markets- competitiveness, goods and factor markets, free and controlled markets. Market and non-market sectors, public and private sectors, economies- free market, command and mixed. 4.4 Different goods: Public goods, Private goods, Common resources and Natural Monopolies.	3	PR
Unit 5: Market Sensitivity and Elasticity	5.1 Importance of Elasticity in Choice-Decisions 5.2 Method of Calculation- Arc Elasticity, Point Elasticity-definition 5.3 Demand and supply Elasticities-types of elasticity and factors affecting elasticity, Demand Elasticity and Revenue, Long run and Short run elasticities of Demand and Supply 5.4 Income and Cross Price Elasticity 5.5 Applications: Case studies – OPEC and Oil Price	8	SS

Skill Enhancement Course (ECON-H-SEC1-1-Th)
Introductory Statistics and Applications (I)
Marks: 75 Credits: 3 No. of Lecture hours (Th): 45
[For Semester-I (NEP)]
Introductory Statistics (Theory) 45 Lecture Hours
July'23 to Dec' 23

Unit 1: Introduction and Overview Lecture hours-10 Faculty Dr. Sanchita Sen

1.1 Subject matter of Statistics

1.2 Basic Steps in Statistical Methods – Collection, Presentation and Analysis of Data

1.2.1 Collection of Data – Primary and Secondary sources – their comparison, methods of Collection of data

1.2.2 Concepts – Variable and Attribute (categorical variable) – Discrete, Continuous and Categorical Variables, Complete Enumeration Survey and Sample Survey, Population and Sample

1.2.3 Presentation of data – Textual, Tabular, Diagrammatic

1.2.4 Frequency Distribution – Construction of Ogives, Column diagram, Frequency Polygon, Histogram, Frequency Curve

1.2.5 Analysis of Data – Univariate and Bivariate Analysis (Concepts only)

Unit 2: Descriptive Statistics Lecture hours-35

2.1 Central Tendency Lecture hours 10 Faculty – Smt. Arpita Bose

2.1.1 Measures of central tendency for ungrouped and grouped data – arithmetic mean, geometric mean, harmonic mean, median and mode–Composite measures; Comparison of different measures, Quartiles, Deciles and Percentiles

2.1.2 Index numbers – Price Index Numbers – problems of construction, methods of construction – aggregative (simple and weighted) and averaging price-relatives (simple and weighted), Laspayre's, Paasche's index numbers, Fisher's Index Number, Quantity Index Numbers, Tests of Index Numbers, Fixed Base and Chain Base, Wholesale price index and cost of living index, Uses of index numbers

2.2 Dispersion Lecture hours 10 Faculty – Smt. Arjama Banerjee

2.2.1 Absolute measures of dispersion for ungrouped and grouped data – range, quartile deviation, mean deviation, standard deviation –Composite SD; Comparison of different measures 2.2.2 Relative measures - coefficient of variation, coefficient of mean deviation, coefficient of quartile deviation

2.2.3 Distribution of income and wealth – Lorenz curve, Gini Coefficient, Theil's Index

2.3 Skewness and Kurtosis Lecture hours 5 Faculty – Smt. Priti Rajak

2.3.1 Moments – central and non-central – computation, conversion

2.3.2 Measures of skewness – Bowley's measure, coefficient of quartile deviation, measure based on moments

2.3.3 Measure of kurtosis – measure based on moments

2.4 Bivariate Analysis Lecture hours10 Faculty – Smt. Priti Rajak

2.4.1 Bivariate data – scatter diagram, Simple correlation coefficient – computation, limitations, and properties

2.4.2 Simple linear regression – Least squares technique – Properties

Interdisciplinary Course (IDC)
Elementary Economics (ECON-H-IDC-1/2/3-Th)
Marks: 50 Credits: 2
No. of Lecture hours (Th): 30
[For Semester-I/ II/ III]

1. Elementary Microeconomic Concepts: 10 Lecture Hours Dr. Sarthak Roy Chowdhury

1.1 Theory of Demand and Supply--Determinants, Law of demand and supply, Demand and supply curves
1.2 Elasticity of Demand and Supply--Concepts of Price and income elasticity and implications
1.3 Theory of Production and Cost—Production function--Concepts of TP, AP, MP, short run-long run and different cost curves-social and external costs
1.4 Market--Different forms-TR, AR and MR-- Pricing and Output Decisions under Perfect competition and monopoly--features and equilibrium (diagrammatic representation only)

2. Elementary Macroeconomic Concepts: 10 Lecture Hours Dr. Sarthak Rou Chowdhury

2.1 National Income Accounting –Circular flow-- concepts of GNP, GDP, NNP, NDP, National Income
2.2 Money and Banking--Different measures of money supply, Difference between central and commercial bank and their functions
2.3 Inflation --Definition, types and anti-inflationary policy
2.4 Fiscal Policy & Monetary Policy -Objectives and Instruments
2.5 International Trade and contemporary issues--Balance of Payments (BOP)--Concepts autonomous and accommodating transactions, Functions of IMF, World Bank, WTO Exchange Rates—PPP (Concepts only)

3. Elementary Economic Development Concepts: 5 Lecture Hours Smt. Priti Rajak
3.1 Growth vs. Development
3.2 Development Indicators - Human Development Index (HDI), Gender (GDI), Poverty (MPI), Inequality (GINI) Indices—India's rank
3.3 Sustainable development--concepts and Goals

4. Elementary Concepts of Indian Economics: 5 Lecture Hours Smt. Arpita Bose
4.1 Economic Reforms in India—Background, Basic steps of trade, industry and financial sector reforms
4.2 NITI AYOG-Structure and objectives

Interdisciplinary Course (IDC)
Elementary Economics (ECON-H-IDC-1/2/3-Tu)
Marks: 25 Credit: 1
No. of Lecture hours (Tu): 15
[For Semester-I/ II/ III]
Mode of Tutorial Examination: Viva or Presentation plus viva

ECONOMICS HONOURS SECOND YEAR SEMESTER III (July'23 to Dec'23)

ECO-A-CC-3-5-TH(Core Course V (CC5)– Intermediate Microeconomics –I) (Theory plus Tutorial) Credit 5+1=6; Marks 100			
Units	**Topic**	**No. of Lectures**	**Faculty**
Unit 1: Theories of Consumer Behaviour and Applications	Unit 1.1: Inter-temporal choice (saving and borrowing)	17	SRC
	Unit 1.2: Revealed preference		
	Unit 1.3: Interdependence and the Gains from Trade Choice under uncertainty – utility function and expected utility, risk aversion and risk Preference		
	Unit 1.4: Applications of Consumer Behaviour in Construction of Price Indices – Laspeyers and Paasche's Indices		SS
Unit 2: Market and Adjustments Production and Costs	2.1 Technology – general concept of Production Function, production with one and two variable inputs,total average and marginal products, short run and long run, returns to factor and returns to scale, Isoquants, marginal rate of technical substitution, isocost line and firm's equilibrium, elasticity of substitution	20	SM
	2.2 Types of production functions- Cobb-Douglas, fixed-coefficient and CES functions		AB1
	2.3 Cost structure- implicit cost, explicit cost, accounting cost, sunk cost, economic cost, fixed cost, variable cost, total, average and marginal cost. Determinants of short run cost, cost curves, cost minimization and expansion path, short versus long run cost curves, economies of scale.		SRC
Unit 3: The Firm and Perfect Market Structure	3.1 Organization, Firms and Profit Maximization	20	SRC
	3.2 Marginal Revenue, Marginal Cost and Profit Maximization		SRC
	3.3 Perfect competition- short run competitive equilibrium of the firm, short run supply curve of firm and industry, Output choice and competitive equilibrium in long run, Economic rent and profit, long-run industry supply- constant, increasing and decreasing cost.		SRC
	3.4Consumer and Producer surplus, welfare and efficiency of competitive equilibrium. Government intervention and dead weight loss, Application- Minimum prices and price supports (price ceiling and price floors)		SRC
Unit 4: Input Market in Perfect Competition	4.1 Basic concepts- derived demand, productivity of an input, marginal product of an input, marginal revenue product	18	AB2
	4.2 Marginal productivity theory of distribution		
	4.3 Labor market-supply of labor, competitive labor markets		
	4.4 Land markets and rent		

ECO-A-CC-3-6-TH (Core Course VI (CC6)– Intermediate Macroeconomics-I (Theory plus Tutorial) Credit 5+1=6; Marks 100			
Units	**Topic**	**No. of Lectures**	**Faculty**
1.Preliminaries 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.	14	SRC
2. 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	14	SS
3. Keynes vs. Classics	Keynesian vs classical system. • Hybrid models under Classical/Keynesian framework. • Friedman's restatement of classical ideas	10	SRC
4. Money Supply, Monetary Policy and Government Budgetary Operations	Measures of money supply with special reference to India (M_1,M_2, M_3 and M_4) • 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.	17	AB1
5. 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.	20	SS

ECO-A-CC-3-7-TH (Core Course VII (CC7)– Statistical Methods for Economics (Theory plus Tutorial) Credit 5+1=6; Marks 100			
Units	**Topic**	**No. of Lectures**	**Faculty**
1. Introduction and Overview	Subject-matter - the distinction between population and sample • Representation of data- graphical (line diagram, bar diagram, pie chart) and tabular method • Frequency Distribution	6	SS
2. Descriptive Statistics	Measures of central tendency(arithmetic mean, geometric mean, harmonic mean, median and mode, and their properties, Quartiles,Deciles and Percentiles) • Dispersion(range, quartile deviation, mean deviation, standard deviation, coefficient of variation, coefficient of mean deviation, coefficient of quartile deviation, Lorenz curve and Gini coefficient) • Moments, Skewness and Kurtosis (definition, computation) • Correlation and Regression (definition, computation, properties)	13	SS, AB2, SM,PR
3. Elementary Probability Theory	Sample spaces and events (concepts and definitions using set theory) • Axiomatic definition of probability and properties, theorem of total probability • Conditional probability, theorem of compound probability • Bayes' theorem and its applications.	10	SS
4. Probability Distributions	Random variable(discrete and continuous) *[1 lecture hour]* • Probability distributions (pmf, pdf. Distribution functions) • Expected values of random variables (mean,variance, raw moment, central moment, moment generating functions) • Properties of commonly used discrete and continuous distributions: Binomial -(derivation of pmf, mean,variance, moments, moment generating functions, problems) Poisson - (derivation of pmf, mean, variance, moments, moment generating functions, problems) Normal - (derivation of pdf, mean, variance, moments, moment generating functions, problems) • Joint distribution functions of random variables (discrete and continuous) - joint pdf (pmf), marginal pdf (pmf)., conditional pdf (pmf)	18	AB1
5. Sampling	Principal steps in a sample survey (concepts of population, sample, parameter, statistic) • Methods of sampling- SRSWR, SRSWOR(use of random sampling numbers) Stratified sampling (basic concepts only) Multi-staged sampling (basic concepts only) • Sampling distribution of sample mean and sample proportion Mean and standard error both in SRSWR and SRSWOR Standard normal, chi-square, Student's t and F distributions – definitions, important properties (mean and variance)	14	AB2

6. Statistical inference	Point estimation-Properties of a good estimator; Basic principles of Ordinary Least Square, Maximum Likelihood Method , Method of Moments; • Interval estimation • Testing of hypothesis (basic concepts of null hypothesis, alternative hypothesis, type I and Type II errors, power of a test, p-value)	14	SS

ECO-A-SEC-3-A(1)-TH-(Skill Enhancement Course I) –Data Analysis [DA] Credits-2, Marks-100			
Units	**Topic**	**No. of Lectures**	**Faculty**
1. Collection and representation of data	1.1 Collection of data (some methodological issues) 1.1.1 Census 1.1.2 Sample survey 1.2 Representation of data 1.3 The basics of data management in Stata / R / Eviews / SPSS / MS Excel	12	SS, PR (Stata)
2. Indian Official Statistics (Basic concepts)	1. Central Statistical Office (CSO) – National Accounts Statistics (NAS), Industrial Statistics (ASI, IIP) 2. National Sample Survey Office (NSSO) – Household Consumer Expenditure Survey Rounds, Employment and Unemployment Survey Rounds 3. Census of India – Population Census 2011 4. Reserve Bank of India (RBI) – Handbook of Statistics on Indian Economy (Selected parts)	18	SS, AB1, AB2,SM

ECO-A-SEC-3-A(1)-TH (Skill Enhancement Course I)-Rural Development [RD] Credits-2, Marks-100			
Units	**Topic**	**No. of Lectures**	**Faculty**
1. 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	6	SS
2. 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	5	AB2
3. Rural Credit and Self	• Role National Bank for Agriculture and Rural	11	PR

Help Groups(SHGs)	Development (NABARD) for promoting Rural Development • 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		
4. 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	8	AB1

GENERIC – SECOND YEAR SEMESTER III (July 2023 – Dec. 2023)

ECO-G-CC-3-3-TH, Generic Elective Course III (GE-III)- Issues in Economic Development and India Theory and Tutorial, Credits- 5+1=6, Marks-100		
Units	**No. of Lectures**	Faculty
1. Meaning of Economic Development	**15**	AB2
2. Poverty , Inequality and Development	**15**	AB1
3. Development of the Dual Economy and Development Strategies	**15**	SS, PR
4. International Organizations and Economic Development	**15**	AB1, AB2

ECONOMICS HONOURS SECOND YEAR SEMESTER IV (Jan'24 to June'24)

ECO-A-CC-4-8-TH (Core Course 8 (CC8)– Intermediate Microeconomics II) (Theory plus Tutorial) Credit 5+1=6; Marks 100			
Units	**Topic**	**No. of Lectures**	**Faculty**
Unit 1: Imperfect Market Structure	Unit 1: Monopoly and barriers to entry- output determination and price rule, measure and sources of monopoly power, social costs of monopoly power- deadweight loss	40	SRC
	Unit 1.2: Pricing with market power- first, second and third degree price discrimination, multiplant Monopoly		
	Unit 1.3: Monopolistic competition- short run and long run equilibrium, excess capacity		
	Unit 1.4: Oligopoly- Oligopoly equilibrium as Nash equilibrium, Cournot, Bertrand and Stackelberg Model- use of isoprofit curves and simple game theoretic interpretation. Sweezy's kinked demand curve model and non-collusive equilibrium. Competition versus collusion- the Prisoners' Dilemma. Collusive Oligopoly –Cartels and Price Leadership		SS

Unit 2: Input market under Imperfect Competition	2.1 Monopsony, bilateral monopoly in labour market	5	SRC
Unit 3: General Equilibrium, Efficiency and Welfare	3.1 General Equilibrium and Economic Efficiency- Exchange, production and welfare, Pareto Optimality, Edgeworth box and contract curve, Pareto efficiency and perfect competition	30	SRC
	3.2 Reasons for Market failure, Pareto efficiency and market failure (externalities and public goods), property right and Coase Theorem 3.3 Markets with asymmetric information-adverse selection, moral hazards, agency problems (concepts only)		

ECO-A-CC-4-9-TH (Core Course 9 (CC9)– Intermediate Macroeconomics II (Theory plus Tutorial) Credit 5+1=6; Marks 100			
Units	**Topic**	**No. of Lectures**	**Faculty**
1. 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	20	SRC
2. 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 Theory	20	SRC
3. 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	35	SRC

ECO-A-CC-4-10-TH ((Core Course 10 (CC10)- Introductory Econometrics) (Theory plus Tutorial) Credit 5+1=6; Marks 100			
Units	**Topic**	**No. of Lectures**	**Faculty**
1. Nature and Scope of Econometrics	1.1 Distinction between Economic Model and Econometric model 1.2 Concept of stochastic relation, Role of random disturbance in econometric model 1.3 Types of data 1.4 Application of Econometrics in different	4	SS

	branches of social science		
2. Classical Linear Regression Model (Simple linear regression and multiple linear regression): part 1	2.1 The classical assumptions (basic interpretation) 2.2 Concepts of population regression function and sample regression function 2.3 Estimation of model by method of ordinary least squares (Derivation in simple linear model (SLRM) and multiple linear model (MLRM) with two regressors only) 2.4. Simple correlation, partial correlation and multiple correlation (Definition, and interpretation in the context of SLRM and MLRM) 2.5 Limitations of SLRM and additional complications in MLRM 2.6 Economic interpretations of the estimated model	15	PR
3. Classical Linear Regression Model (Simple linear regression and multiple linear regression): part 2	3.1 Properties of the Least Squares Estimators (BLUE) in SLRM- Gauss-Markov theorem 3.2 Qualitative (dummy) independent variables – intercept dummy and slope dummy (only interpretation of the model) 3.3 Forecasting – Ex-post forecast and Ex-ante forecast, forecast error (only for two variable model)	10	PR
4. Statistical inference in linear regression model	4.1 Use of standard normal, chi2, t, and F statistics in linear regression model 4.2 Testing hypothesis Single test (t test and chi2 test) Joint test (F test) 4.3 Goodness of fit (in terms of R_2, adjusted R_2 and F statistic), Analysis of Variance (ANOVA) 4.4 Statistical significance and economic importance	26	PR
5. Violations of Classical Assumptions	5.1 Multicollinearity - Consequences, Detection (Variance Inflationary Factor (VIF)) and Remedies 5.2 Heteroscedasticity - Consequences, Detection (Lagrange Multiplier test) and Remedies 5.3 Autocorrelation - Consequences, Detection (Durbin-Watson test) and Remedies	12	PR
6. Specification Analysis	6.1 Omission of a relevant variable 6.2 Inclusion of irrelevant variable 6.3 Tests of specification errors 6.4 Testing for linearity and normality assumptions	8	SS

ECO-A-SEC-4-B(2)-TH (Skill Enhancement Course II)-Research Methodology Credit 2; Marks 100			
Units	**Topic**	**No. of Lectures**	**Faculty**
1. Methodological Issues 1	• 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	10	SS
2. 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.[The course instructor should focus on framing the testable hypothesis and the role of statistical inference in empirical research] • Illustrations of theoretical research: specification of the model, closing the model, checking stability of the model for meaningful comparative static results. [The course instructor should focus on the role of stability analysis in theoretical models by showing the method of linearizing non-linear differential equations. Illustrations can be made from IS-LM model by using trace and determinant conditions of the Jacobian matrix-the role of phase diagrams] • 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.	20	SS

ECO-A-SEC-4-B(2)-TH (Skill Enhancement Course II)-Managerial Economics Credits-2, Marks-100			
Units	**Topic**	**No. of Lectures**	**Faculty**
1. 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	6	AB2
2. Pricing Policies and practices	• Factors governing prices, price discounts and differentials, price forecasting	3	AB2
3. 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	8	AB2
4. Cost of capital	• Cost of debt capital, cost of share capital, cost of equity capital, cost of retained earnings	5	AB2
5. 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.	8	AB2

GENERIC – SECOND YEAR SEMESTER IV (Jan. 2024 -July 2024)

ECO-G-CC-4-4TH, Generic Elective Course 4 (GE-4)- Indian Economic Policies Theory and Tutorial, Credits- 5+1=6, Marks-100		
Units	**No. of Lectures**	**Faculty**
1. Macroeconomic Policies and their Impact	**15**	AB1
2. Policies and Performance in Agriculture	**21**	PR
3. Policies and Performance in Industry	**21**	SS
4. Policies and Performance of Indian Foreign Trade	**18**	AB2

ECONOMICS HONOURS THIRD YEAR SEMESTER V (July'23 to Dec'23)

ECO-A-CC-5-12 TH - (Core Course 11 (CC11)– International Economics) (Theory plus Tutorial) Credit 5+1=6; Marks 100			
Units	**Topic**	**No. of Lectures**	**Faculty**
Unit 1: Absolute and	• Adam Smith's theory of absolute advantage.	9	SRC

Comparative Advantages of Trade	• 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.		
Unit 2: 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	14	SRC
Unit 3: 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 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 (Rybczyski 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..	15	SRC
Unit 4: 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	10	SRC

	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 structuresignificance of the assumption of constant returns to scale-the indecomposability property. Implications of price magnification effects in specific factor model..		
5. Trade Policy	• Partial Equilibrium Analysis of Tariff - cost–benefit, Quota, Quota- Tariff equivalence & nonequivalence, 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.	12	SRC
6. Open Economy Macroeconomics and Balance of Payments	• Determination of equilibrium income in 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)	15	SRC

ECO-A-CC-5-12 TH (Core Course 12 (CC12)– Indian Economy) (Theory plus Tutorial) Credit 5+1=6; Marks 100

Units	Topic	No. of Lectures	Faculty
Unit 1: 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	20	SS
Unit 2: Population and Human Development	• Demographic trends and issues • Education and health:Basic problems and Government measures, Right to Education (RTE) Act 2009	15	PR
Unit 3: 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	20	SS
Unit 4: Economic Reforms in India	• Banking sector reforms • Reforms in tax policy • Reforms in the external sector • Reforms in Labour market	20	SS

ECO-A-DSE-5-A(1)-TH (Discipline Specific Elective – A(1): (DSEA1) Applied Econometrics [AE]) (Theory plus Practical) Credit 4+2=6; Marks 100			
Units	**Topic**	**No. of Lectures**	**Faculty**
Unit 1: Steps in empirical research	Use of econometric models in empirical research – some basic concepts The basic commands in Stata / R	10	AB2
Unit 2: Regression Diagnostics and Specification	Misspecification Functional forms Model selection Application with Stata / R	20	PR
Unit 3: 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 concepts of fixed effects model; random effects model – (Application with Indian Official Statistics using Stata / R)	30	PR

ECO-A-DSE-5-A(1)-TH (Discipline Specific Elective – A(1): (DSEA1)– Economic History of India (1857-1947) [EHI] (Theory plus Tutorial) Credit 5+1=6; Marks 100			
Units	**Topic**	**No. of Lectures**	**Faculty**
Unit 1: Impact of British rule on India	• Deindustrialization • Commercialization of agriculture • Economic Drain	30	AB2, AB1,SRC
Unit 2: 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	45	SRC

ECO-A-DSE-5-B1-TH (Discipline Specific Elective – B(1): (DSEB1)– Comparative Economic Development (1850-1950) [CED] (Theory plus Tutorial) Credit 5+1=6; Marks 100			
Units	**Topic**	**No. of Lectures**	**Faculty**
Unit 1: Strategies and Policies for Economic Development	• Laissez-faire and free trade • Strategy of industrialization in Soviet Union.	30	SS
Unit 2: Regions of contemporary development	• Success stories of Asia : Japan, South East Asia and China • Crisis and failures of Latin America and Africa	45	SS

ECO-A-DSE-5-B1-TH (Discipline Specific Elective – B(1): (DSEB1)– Financial Economics [FE] (Theory plus Tutorial) Credit 5+1=6; Marks 100			
Units	**Topic**	**No. of Lectures**	**Faculty**
Unit 1: 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; 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.	35	AB1
Unit 2: Options and 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.	20	AB1
Unit 3: 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.	20	AB1

ECONOMICS HONOURS THIRD YEAR SEMESTER VI (Jan'24 to June'24)

ECO-A-CC-6-13 TH - (Core Course 14 (CC14) – Public Economics) (Theory plus Tutorial) Credit 5+1=6; Marks 100			
Units	**Topic**	**No. of Lectures**	**Faculty**
Unit 1: Government in a Market	• Market failure and externalities; public and merit goods; • Government intervention; • Public Expenditure for financing development	15	AB2
Unit 2: Choice and Public Economics	• Characteristics of Pure Public Good; Distinction between Pure Public Good and Private Good;	20	AB2

	• 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.		
Unit 3: 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; • Comparison between direct and indirect taxes – income and substitution effects; • Optimal Taxation	20	SRC
Unit 4: 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	20	SRC

ECO-A-CC-6-14 TH (Core Course 14 (CC14)– Development Economics) (Theory plus Tutorial) Credit 5+1=6; Marks 100			
Units	**Topic**	**No. of Lectures**	**Faculty**
Unit 1: 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.	10	SS
Unit 2: Poverty and 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	15	PR
Unit 3: 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)	20	SS

Unit 4: Population Growth and 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).	10	SS
Unit 5: Development Strategies	• Balanced vs. Unbalanced Growth Theories • Choice of Techniques	10	SS
Unit 6: 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.	10	SS

ECO-A-DSE-6-A2-TH (Discipline Specific Elective – A(2): (DSEA2)– Money and Financial Markets [MFM] (Theory plus Tutorial) Credit 5+1=6; Marks 100			
Units	**Topic**	**No. of Lectures**	**Faculty**
Unit 1: Introduction to money and Money and Banking	• Concept, functions, measurement; theories of money supply determination**.**	5	AB1
Unit 2: 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 banks are special Institutions? How banks act as a leveraging mechanism?	17	AB1
Unit 3: Financial Markets and Interest Rates Behaviour	• Determination; sources of interest rate differentials; • Theories of term structure of interest rates; interest rates in India.	18	AB1
Unit 4: 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	20	AB1
Unit 5: 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**.**	15	AB1

ECO-A-DSE-6-A2-TH (Discipline Specific Elective – A(2): (DSEA2)– Issues in

Indian Economy [IIE] (Theory plus Practical) Credit 4+2=6; Marks 100			
Units	**Topic**	**No. of Lectures**	**Faculty**
Unit 1: Growth and structural changes	• Concept, functions, measurement; theories of money supply determination**.**	4	SS
Unit 2: Macroeconomic Policies and Their Impact	• Fiscal Policy • Trade and investment policy • Financial and monetary policies • Inflation and measures to control inflation • Labour laws and regulation	15	SS
Unit 3: 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	15	SS
Unit 4: 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	12	SS
Unit 5: Trends and Performance in Services	• Formal and informal sectors • Banking and insurance • Trade in services	14	SS

ECO-A-DSE-6-B2-TH (Discipline Specific Elective – B(2): (DSEB2)– Environmental Economics [EE] (Theory plus Tutorial) Credit 5+1=6; Marks 100			
Units	**Topic**	**No. of Lectures**	**Faculty**
Unit 1: Introduction	1.1 What is environmental economics; 1.2 Review of microeconomics and welfare economics. 1.3 Interlinkages between the economy and environment	7	AB2
Unit 2: Efficiency and Market Failure	2.1 Pareto optimality and market failure in the presence of externalities 2.2 Property rights and the Coase theorem 2.3 Public goods/ bads and market failure	18	AB2
Unit 3: The Design and Implementation of Environmental Policy	3.1 Pigouvian Fees – Single Polluter, Multiple Polluters, Fees vs Subsidies 3.2 Regulating Pollution : Command and Control, Economic Incentives 3.3 The Basic Theory of Tradeable Pollution Permits.	20	PR
Unit 4: International Environmental Problems	4.1 Transboundary Pollution – Transboundary Pollution as a problem of international externalities 4.2 International Trade and Environment – Pollution Havens 4.3 International Environmental Agreements –	13	PR

	Basic idea about Montereal and Kyoto Protocol and Talks on Climate Change		
Unit 5: Measuring the values of Environmental Costs and BenefitsPolicy	5.1 Concepts of Willingness to pay (WTP) and Willingness to accept compensation (WTAC), Difference between the two concepts 5.2 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.	17	AB2

ECO-A-DSE-6-B2-TH (Discipline Specific Elective – B(2): (DSEB2)– Issues in Development Economics [IDE] (Theory plus Tutorial) Credit 5+1=6; Marks 100			
Units	**Topic**	**No. of Lectures**	**Faculty**
Unit 1: 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.	10	SS
Unit 2: 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 • Iinformational problems and credit contracts • Microfinance • Inter- linkages between rural factor markets.	20	SS
Unit 3: Individuals, Communities and Collective Outcomes	Individual behavior in social environments • Multiple social equilibria; • Governance in organizations and in communities; • Individual responses to organizational inefficiency.	15	SS
Unit 4: 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.	15	SS
Unit 5: 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	15	SS