B.A./B.Sc. Economics (Major)

CO PO Mapping

Course Outcome

DSCC1: Microeconomics-I

Semester-I

(Credits: 04, Theory-03, Tutorial-01)

Course Outcomes (COs)

1. **CO1:** Understand and apply the concept of utility to analyze consumer choices and preferences.
2. **CO2:** Analyze the determinants and behavior of demand and supply in various market conditions.
3. **CO3:** Examine different market structures and the adjustments that occur in these markets.
4. **CO4:** Evaluate the sensitivity of demand and supply to changes in prices and other factors, focusing on elasticity.

POs/COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	√	√			√				√			
CO2	√	√			√				√		√	
CO3	√	√		√	√				√		√	
CO4	√				√						√	

Course Outcome

SEC 1: Introductory Statistics and Application-I

Semester-I

(Credits: 04, Theory-03, Tutorial-01)

Course Outcomes (COs)

CO1: Collect and present economic data using appropriate methods and tools.

CO2: Analyze and interpret measures of central tendency (mean, median, and mode) in economic data.

CO3: Assess the dispersion of economic data using range, variance, and standard deviation.

CO4: Evaluate the skewness and kurtosis of economic data to understand its distribution characteristics.

CO5: Analyze bivariate data to identify relationships between two economic variables.

POs/COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	√				√		√			√	√	√
CO2	√				√		√			√	√	√
CO3	√				√		√			√	√	√
CO4	√				√		√			√	√	√
CO5	√						√		√	√	√	√

Course Outcome

DSCC2: Macroeconomics-II

Semester-II

(Credits: 04, Theory-03, Tutorial-01)

Course Outcomes (COs)

CO1: Understand and apply national income accounting concepts to measure and analyze economic performance.

CO2: Analyze the Simple Keynesian model to understand aggregate demand and its effects on national income and employment.

CO3: Evaluate the basic theory of investment and its impact on economic growth and stability.

CO4: Compare and contrast the classical economic system with other economic models and understand its implications for inflation.

CO5: Analyze the causes and consequences of inflation within different economic frameworks.

POs/COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	√	√			√				√			
CO2	√	√			√				√		√	
CO3	√	√		√	√				√		√	
CO4	√				√						√	
CO5	√				√				√		√	

Course Outcome

SEC 2: Introductory Statistics and Application-II

Semester-II

(Credits: 04, Theory-01, Practical-03)

Course Outcomes (COs)

CO1: Understand and analyze cross-sectional data to make inferences about a population at a single point in time.

CO2: Analyze time series data to identify trends, cycles, and seasonal variations over time.

CO3: Evaluate the advantages and disadvantages of field surveys as a data collection method.

CO4: Apply Excel to perform statistical analyses and present data effectively.

CO5: Use descriptive statistics to summarize and describe the main features of a dataset.

POs/COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	√				√		√			√	√	√
CO2	√				√		√			√	√	√
CO3	√				√		√			√	√	√
CO4	√				√		√			√	√	√
CO5	√						√		√	√	√	√

Course Outcome

DSCC3: Microeconomics-II

Semester-III

(Credits: 04, Theory-03, Tutorial-01)

CO1: Analyze consumer behavior to understand how individuals make decisions regarding consumption and utility maximization.

CO2: Evaluate production processes and cost structures to determine how firms manage resources and costs to maximize profits.

CO3: Examine the characteristics of firms and the perfect market structure to understand how markets operate under ideal conditions.

CO4: Analyze input markets in perfect competition to understand how factors of production are bought and sold in competitive markets.

POs/COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	√	√			√				√			
CO2	√	√			√				√		√	
CO3	√	√		√	√				√		√	
CO4	√				√						√	

Course Outcome

DSCC4: Development Economics- I

Semester-III

(Credits: 04, Theory-03, Tutorial-01)

CO1: Understand and explain the fundamental concepts and theories of development economics, including key indicators and metrics of development.

CO2: Analyze the causes and consequences of poverty and inequality, and evaluate policies aimed at reducing them.

CO3: Examine the dual economy model and its implications for development strategies in different economic contexts.

CO4: Assess the role of financial inclusion in promoting economic development and reducing disparities.

POs/COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	√	√			√				√			
CO2	√	√			√				√		√	
CO3	√	√		√	√				√		√	
CO4	√				√						√	

Course Outcome

SEC 3: Data Analysis and Research Methodology

Semester-III

(Credits: 04, Theory-02, Practical-02)

CO1: Understand and apply various methodologies for collecting data to ensure accuracy and reliability.

CO2: Record and validate data effectively to maintain data integrity and prepare it for analysis.

CO3: Develop skills in writing reports by understanding and implementing the key elements of report writing.

CO4: Utilize Power Query in Excel to efficiently import, transform, and manage data.

POs/COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	√				√		√			√	√	√
CO2	√				√		√			√	√	√
CO3	√				√		√			√	√	√
CO4	√				√		√			√	√	√

Programme Outcomes of B.A./B.Sc. Economics (Major)

PO1	To develop analytical ability among students
PO2	To have an idea about how the Government functions
PO3	To have an idea about the evolution of the present day Indian Economy
PO4	To maximise standard of living and to achieve stable Economic Growth
PO5	To understand and apply core Economic Principles related to consumers, producers and market
PO6	To know policy making mechanism related to money and currency from an applied finance context
PO7	Application of Statistics and Mathematics in Economics usually used for forecasting
PO8	Basic idea of Indian Economic structure, problems and policies
PO9	Understand and evaluate the ethical implications and social impacts of economic policies and decisions.
PO10	Apply analytical methods to address complex issues related to development, poverty, inequality, and economic policies.
PO11	Apply analytical methods to collect, record, and analyze data effectively.
PO12	Communication Skills: Effectively communicate research findings and analyses through well-structured reports and presentations.

Microeconomics (II)

(Credit: 04, Theory: 03, Tutorial: 01)

[For Semester-III]

Course Learning Outcomes (COs):

- **CO1:** Analyze advanced theories of consumer behavior, including derivation of demand curves, income and substitution effects (Hicks and Slutsky), and the concept of revealed preference.
- **CO2:** Apply consumer behavior principles to real-world scenarios such as labor-leisure trade-off and inter-temporal choice, and evaluate decisions under uncertainty using utility functions.
- **CO3:** Explain the concepts of production theory, including different production functions, returns to scale, and firm equilibrium using isoquants and isocost lines.
- **CO4:** Differentiate between various cost concepts, derive short-run and long-run cost curves, and explain the concept of economies of scale.
- **CO5:** Evaluate firm behavior and market outcomes under perfect competition, including profit maximization, short-run and long-run equilibrium, and efficiency.
- **CO6:** Analyze the impact of government interventions (e.g., price controls, taxes) on perfectly competitive markets and assess consumer and producer surplus and deadweight loss.
- **CO7:** Understand the functioning of perfectly competitive input markets, including the derived demand for inputs, marginal productivity theory of distribution, and specific factor markets like labor and land.

COs –POs Mapping

POs \ COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	✓				✓							
CO2	✓			✓	✓				✓			
CO3	✓			✓	✓		✓					
CO4	✓			✓	✓		✓					
CO5	✓			✓	✓							
CO6	✓	✓		✓	✓	✓			✓	✓		
CO7	✓			✓	✓							

Development Economics (I)

(Credit: 04, Theory: 03, Tutorial: 01)

[For Semester-III]

Course Learning Outcomes (COs):

- **CO1:** Differentiate between economic growth and development, explain their goals and indicators (including HDI, HPI, MPI), and analyze global development challenges and opportunities.
- **CO2:** Analyze the causes and consequences of poverty and income inequality in developing economies, and evaluate various measures of poverty and inequality (e.g., Poverty Line, Lorenz Curve, Gini Coefficient).
- **CO3:** Critically evaluate classical development theories, including the Lewis Model of economic development with surplus labor, and discuss different development strategies such as balanced versus unbalanced growth.
- **CO4:** Examine the role of financial inclusion, microfinance, banks, and other financial institutions in promoting economic development and poverty alleviation, particularly in rural areas.
- **CO5:** Understand the objectives and functions of international financial institutions like the IMF, World Bank, and WTO in the context of global development.
- **CO6:** Apply analytical methods to interpret data related to development indicators, poverty measures, and inequality, and use them to draw informed conclusions.
- **CO7:** Solve quantitative problems and analyze case studies related to development economics, demonstrating an understanding of economic concepts and their application.
- **CO8:** Effectively present and communicate complex development economics concepts, analyses, and research findings through oral presentations and written reports.

COs –POs Mapping

POs \ COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	✓		✓	✓	✓					✓		
CO2	✓		✓	✓	✓		✓	✓	✓	✓		
CO3	✓		✓	✓	✓					✓		
CO4	✓	✓	✓	✓	✓	✓		✓	✓	✓		
CO5		✓		✓	✓	✓		✓				
CO6	✓						✓				✓	

CO7	✓						✓				✓	
CO8												✓

Data Analysis and Research Methodology

(Credit: 04, Theory: 02, Tutorial: 02)

[For Semester-III]

Course Learning Outcomes (COs):

- **CO1:** Describe and compare various methodologies for data collection, including different sampling techniques and the process of questionnaire design.
- **CO2:** Demonstrate proficiency in recording, validating, and organizing collected data using appropriate tabular representations.
- **CO3:** Apply fundamental statistical measures (measures of central tendency and dispersion) to analyze data and interpret results for research purposes.
- **CO4:** Utilize advanced software tools like MS Excel (including Power Query) and Power BI for data transformation, visualization, and informed decision-making.
- **CO5:** Conduct a small-scale primary data survey, encompassing questionnaire preparation, data collection, and initial statistical analysis using computational tools.
- **CO6:** Construct a well-structured research report by identifying key issues, conducting literature surveys, presenting data effectively (tables/graphs), and adhering to academic referencing standards.
- **CO7:** Communicate research findings, data interpretations, and methodological insights clearly and effectively through dynamic presentations and viva-voce examinations.

COs and POs Mapping

POs \ COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	✓						✓			✓	✓	
CO2	✓						✓				✓	
CO3	✓						✓			✓	✓	
CO4	✓			✓			✓			✓	✓	
CO5	✓						✓			✓	✓	
CO6	✓								✓	✓		✓

CO7												✓

Mathematical Economics (I)

(Credit: 04, Theory: 03, Tutorial: 01)

[For Semester-III]

Course Learning Outcomes (COs):

- **CO1:** Apply fundamental mathematical concepts including sets, matrices, and functions of one real variable (limits, continuity, differentiability) to solve economic problems.
- **CO2:** Analyse the properties of functions of several variables using partial and total derivatives, Hessian matrices, and concepts of homogeneity and homotheticity.
- **CO3:** Apply optimization techniques for single-variable and unconstrained multi-variable functions to solve economic problems such as profit maximization.
- **CO4:** Utilize constrained optimization methods (Lagrange multiplier, Bordered Hessian, Kuhn-Tucker conditions) to derive and interpret economic functions like demand, cost, and utility, and solve related optimization problems.
- **CO5:** Formulate and graphically solve Linear Programming Problems (LPPs) and interpret duality theorems in economic contexts like diet and production problems.
- **CO6:** Solve quantitative problems in mathematical economics, demonstrating proficiency in applying economic principles with mathematical tools.
- **CO7:** Effectively present and communicate solutions, derivations, and economic interpretations of mathematical models through oral presentations and discussions.

COs and POs Mapping

POs \ COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	✓				✓		✓					
CO2	✓				✓		✓					
CO3	✓			✓	✓		✓			✓		
CO4	✓			✓	✓		✓			✓		
CO5	✓			✓	✓		✓			✓		
CO6	✓			✓	✓		✓			✓		

CO7	✓											✓

Macroeconomics (II)

(Credit: 04, Theory: 03, Tutorial: 01)

[For Semester-IV]

Course Learning Outcomes (COs):

- CO1: Analyze the IS-LM model to determine equilibrium income and interest rates, understand its stability, and evaluate the effects of fiscal and monetary policies, including crowding out.
- CO2: Derive and analyze Aggregate Demand (AD) and Aggregate Supply (AS) curves (with and without wage rigidity), determine macroeconomic equilibrium and its stability, and assess the effects of policy interventions and wage cuts.
- CO3: Differentiate between the Classical and Keynesian economic systems, including their views on unemployment equilibrium and the role of the real balance effect, and understand hybrid models and Friedman's restatement of classical ideas.
- CO4: Understand various measures of money supply (M1, M2, M3, M4 with reference to India), analyze the balance sheet approach to money supply, and comprehend the concepts of high-powered money and different money multipliers.
- CO5: Evaluate the tools and effectiveness of monetary policy (OMO, SLR, Bank rate, CRR, Repo rate) and analyze the relationship between government budget deficits and monetary policy in India.
- CO6: Explain the inflation-unemployment trade-off, analyze different models of aggregate supply (sticky-wage, worker-misperception, imperfect-information, sticky-price), derive the Phillips Curve, and understand the role of expectations (adaptive, rational) and concepts like disinflation and sacrifice ratio.
- CO7: Solve quantitative problems and analyze theoretical scenarios related to the IS-LM model, AD-AS, money supply, monetary policy, and the Phillips Curve.
- CO8: Effectively present and communicate complex macroeconomic models, analyses, and policy implications, enhancing confidence in the subject through presentations and discussions.

COs and POs Mapping

COs and POs Mapping

POs \ COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	✓	✓		✓	✓	✓	✓			✓		
CO2	✓	✓		✓	✓	✓	✓			✓		

CO3	✓				✓					✓		
CO4	✓	✓	✓		✓	✓	✓	✓				
CO5	✓	✓	✓	✓	✓	✓		✓		✓		
CO6	✓	✓		✓	✓	✓	✓			✓		
CO7	✓	✓	✓	✓	✓	✓	✓	✓		✓		
CO8	✓											✓

Statistics for Economics

(Credit: 04, Theory: 03, Tutorial: 01)

[For Semester-IV]

Course Learning Outcomes (COs):

- **CO1:** Apply fundamental concepts of probability theory, including conditional probability, independence, total probability, and Bayes' Theorem, to solve economic problems.
- **CO2:** Differentiate between various discrete and continuous probability distributions (Binomial, Poisson, Normal), calculate their key properties (mean, variance, moments), and understand joint distributions of random variables.
- **CO3:** Explain the principles of sampling theory, including different random sampling methods (SRS, stratified, multi-stage), and comprehend the concepts of sampling distributions and standard errors for statistics.
- **CO4:** Understand and apply the basic properties of important sampling distributions such as Chi-square, Student's t, and F distributions.
- **CO5:** Apply principles of point and interval estimation, evaluate the criteria of good estimators (unbiasedness, consistency, sufficiency), and use methods like OLS, MLE, and Method of Moments for parameter estimation.
- **CO6:** Formulate and test hypotheses regarding population parameters (mean, standard deviation, proportion) using appropriate statistical tests and interpret p-values and types of errors.
- **CO7:** Solve quantitative problems in statistics related to probability, distributions, sampling, estimation, and hypothesis testing, applying statistical tools effectively.
- **CO8:** Effectively present and communicate statistical analyses, problem solutions, and interpretations of results, enhancing confidence in the subject through presentations and discussions.

COs and Pos Mapping

Pos \ COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	✓						✓			✓		
CO2	✓						✓			✓		
CO3	✓						✓			✓	✓	
CO4	✓						✓			✓	✓	
CO5	✓			✓	✓	✓	✓			✓	✓	
CO6	✓	✓		✓	✓	✓	✓			✓	✓	
CO7	✓						✓			✓	✓	
CO8	✓											✓

Indian Economics (I)

(Credit: 04, Theory: 03, Tutorial: 01)

[For Semester-IV]

Course Learning Outcomes (COs):

- **CO1:** Analyze the trajectory of India's economic development since independence, differentiating between various policy regimes (planning to market-based) and critically evaluating the achievements and failures of planning and economic reforms.
- **CO2:** Examine the demographic trends and human development challenges in India, including basic problems and government measures related to health and education (e.g., RTE Act 2009).

- **CO3:** Evaluate trends in GDP, per capita GDP, poverty, inequality, and unemployment in India, understanding their interlinkages and policy perspectives for inclusive growth.
- **CO4:** Understand and analyze the major economic reforms undertaken in India across industrial, financial, fiscal, trade, external, labor, and public sectors.
- **CO5:** Apply analytical tools to critically assess the regional variations in growth and development across India.
- **CO6:** Solve problems or analyze specific case studies related to Indian economic issues, applying theoretical knowledge to real-world scenarios.
- **CO7:** Effectively present and communicate analyses and findings on Indian economic issues through oral presentations and discussions, enhancing academic communication skills.

Cos –POs Mapping

POs \ COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	✓	✓	✓	✓	✓	✓		✓	✓	✓		
CO2	✓	✓	✓	✓	✓	✓		✓	✓	✓		
CO3	✓	✓	✓	✓	✓	✓		✓	✓	✓		
CO4	✓	✓	✓	✓	✓	✓		✓	✓	✓		
CO5	✓		✓	✓				✓		✓		
CO6	✓		✓	✓	✓			✓	✓	✓		
CO7												✓

Sustainable Development

(Credit: 04, Theory: 03, Tutorial: 01)

[For Semester-IV]

Course Learning Outcomes (COs):

- **CO1:** Explain fundamental environmental issues and problems from an economic perspective, including the circular flow of pollutants, waste recycling, and the nature of renewable and non-renewable resources.
- **CO2:** Differentiate various definitions and rules of sustainable development, and evaluate different measures and approaches to sustainable resource management, including the role of property rights.

- **CO3:** Analyze the sustainable management of different renewable resources (fishery, forestry, water) and understand the concept of sustainable livelihood.
- **CO4:** Examine the economics of trans-boundary pollution and climate change, including the functioning of carbon credit markets, Clean Development Mechanism (CDM), and international emission trading.
- **CO5:** Evaluate the implementation of environmental policies in developing countries and the role of international agreements (meetings, protocols, treaties) in addressing global environmental problems.
- **CO6:** Solve problems or analyze case studies related to environmental economics and sustainable development, applying theoretical concepts to real-world challenges.
- **CO7:** Effectively present and communicate analyses, findings, and solutions on sustainable development issues through oral presentations and discussions.

Cos –POs Mapping

POs \ COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	✓			✓	✓				✓	✓		
CO2	✓	✓		✓	✓	✓			✓	✓		
CO3	✓	✓		✓	✓	✓			✓	✓		
CO4	✓	✓		✓	✓	✓			✓	✓		
CO5	✓	✓		✓	✓	✓		✓	✓	✓		
CO6	✓			✓	✓			✓	✓	✓		
CO7												✓

Microeconomics (III)

(Credit: 04, Theory: 03, Tutorial: 01)

[For Semester-V]

Course Learning Outcomes (COs):

- **CO1:** Analyze the behavior of firms and market outcomes under various imperfect market structures, including monopoly, monopolistic competition, and oligopoly (Cournot, Bertrand, Stackelberg, Kinked demand curve, game theory concepts).
- **CO2:** Evaluate different pricing strategies employed by firms with market power, such as various degrees of price discrimination, peak-load pricing, and two-part tariffs, and assess the social costs of monopoly power.
- **CO3:** Examine the functioning of input markets under imperfect competition, specifically analyzing monopsony and bilateral monopoly in the labor market.
- **CO4:** Understand and apply the concepts of general equilibrium, Pareto optimality, and economic efficiency in exchange and production using tools like the Edgeworth box and contract curve.
- **CO5:** Identify and analyze reasons for market failure, including externalities, public goods, property rights (Coase Theorem), and markets with asymmetric information (adverse selection, moral hazard, agency problems).
- **CO6:** Solve quantitative problems and analyze theoretical scenarios related to imperfect competition, market power, and general equilibrium concepts.
- **CO7:** Effectively present and communicate complex microeconomic models, analyses, and solutions, enhancing confidence in the subject through presentations and discussions.

COs –POs Mapping

POs \ COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	✓			✓	✓							

CO2	✓			✓	✓				✓			
CO3	✓			✓	✓							
CO4	✓	✓		✓	✓		✓		✓	✓		
CO5	✓	✓		✓	✓	✓			✓	✓		
CO6	✓				✓		✓			✓		
CO7	✓											✓

Macroeconomics (III)

(Credit: 04, Theory: 03, Tutorial: 01)

[For Semester-V]

Course Learning Outcomes (COs):

- **CO1:** Understand the core tenets of New Classical (rational expectations, real business cycles) and New Keynesian (nominal and real rigidities, credit rationing) macroeconomic theories.
- **CO2:** Analyze various theories of consumption, including Keynesian, Fisher's inter-temporal choice, life-cycle, permanent income, and Duesenberry's relative income hypotheses.
- **CO3:** Examine different theories of money demand, such as Tobin's portfolio choice and Baumol's inventory-theoretic models.
- **CO4:** Evaluate foundational economic growth models (Harrod-Domar, Solow with steady state and golden rule), understand the role of technological progress, and grasp basic ideas of endogenous growth theory (AK model).
- **CO5:** Solve quantitative problems and analyze theoretical scenarios related to macroeconomic models of consumption, money demand, and economic growth.
- **CO6:** Effectively present and communicate complex macroeconomic concepts, models, and analyses, enhancing confidence in the subject through presentations and discussions.

COs –POs Mapping

POs \ COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	✓	✓			✓	✓				✓		
CO2	✓			✓	✓					✓		

CO3	✓				✓	✓						
CO4	✓	✓		✓	✓	✓	✓			✓		
CO5	✓				✓		✓			✓		
CO6	✓											✓

Mathematical Economics II

(Credit: 04, Theory: 03, Tutorial: 01)

[For Semester-V]

Course Learning Outcomes (COs):

- **CO1:** Apply core concepts of game theory, including pure and mixed strategies, dominant strategies, and Nash equilibrium, to analyze strategic interactions in economic contexts (e.g., Prisoners' Dilemma, Battle of Sexes).
- **CO2:** Utilize integration techniques (substitution, by parts) to find total functions from marginal functions and calculate present values in economic applications.
- **CO3:** Solve first and second-order linear difference equations and apply them to model dynamic economic phenomena such as the Cobweb model and the multiplier-accelerator model.
- **CO4:** Solve first and second-order linear differential equations and systems of differential equations, understanding concepts of fixed points and stability, including through qualitative-graphic approaches.
- **CO5:** Apply differential equations to model and analyze dynamic processes in microeconomics and macroeconomics, such as price dynamics, multi-market equilibrium, inflation-unemployment interaction, and the Solow and IS-LM models.
- **CO6:** Solve quantitative problems and analyze theoretical scenarios involving game theory, integral calculus, difference equations, and differential equations in economic applications.
- **CO7:** Effectively present and communicate solutions, derivations, and economic interpretations of dynamic mathematical models through oral presentations and discussions.

COs –POs Mapping

POs \ COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	✓	✓		✓	✓	✓	✓			✓		
CO2	✓			✓	✓		✓					
CO3	✓	✓		✓	✓	✓	✓			✓		
CO4	✓	✓		✓	✓	✓	✓			✓		
CO5	✓	✓		✓	✓	✓	✓			✓		
CO6	✓	✓		✓	✓	✓	✓			✓		
CO7	✓											✓

Econometrics I

(Credit: 04, Theory: 03, Tutorial: 01)

[For Semester-V]

Course Learning Outcomes (COs):

- **CO1:** Differentiate between economic and econometric models, explain the role of random disturbance, and comprehend the scope and applications of econometrics in social sciences.
- **CO2:** Formulate and interpret Simple and Multiple Linear Regression Models (SLRM & MLRM), understand their classical assumptions, and estimate parameters using the Ordinary Least Squares (OLS) method.
- **CO3:** Evaluate the properties of OLS estimators (e.g., Gauss-Markov theorem), conduct hypothesis testing for single and joint coefficients, and assess model fit using R2, adjusted R2, and F-statistic (ANOVA).
- **CO4:** Incorporate and interpret qualitative (dummy) independent variables (intercept and slope dummies) in regression models, and understand basic concepts of forecasting (ex-post, ex-ante).
- **CO5:** Identify, detect, and propose remedies for violations of classical assumptions, specifically multicollinearity, heteroscedasticity, and autocorrelation, and understand their consequences.
- **CO6:** Solve quantitative problems related to regression analysis, hypothesis testing, and model interpretation, demonstrating proficiency in econometric methods.
- **CO7:** Effectively present and communicate econometric analyses, model interpretations, and solutions, building confidence in the subject through presentations and discussions.

COs –POs Mapping

POs \ COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	✓				✓		✓			✓		
CO2	✓				✓		✓				✓	
CO3	✓			✓	✓	✓	✓			✓	✓	
CO4	✓				✓		✓				✓	
CO5	✓			✓	✓	✓	✓			✓	✓	
CO6	✓	✓		✓	✓	✓	✓	✓		✓	✓	
CO7	✓											✓

Economic History of India (1857-1947)

(Credit: 04, Theory: 03, Tutorial: 01)

[For Semester-V]

Course Learning Outcomes (COs):

- **CO1:** Analyze the macro trends of the colonial Indian economy (1857-1947), including national income, population dynamics, and occupational structure.
- **CO2:** Examine the agrarian structure, land relations, agricultural markets, institutions, and performance trends in colonial India, including the causes and impacts of famines.
- **CO3:** Evaluate the role of railways and analyze the debates surrounding de-industrialization and the evolution of India's industrial structure during the colonial period.
- **CO4:** Understand and critically assess the imperial priorities, the 'drain of wealth' theory, and the impact of international trade and capital flows on the colonial Indian economy.
- **CO5:** Analyze the nature of government intervention and fiscal policy within the imperial context and their implications for the Indian economy.
- **CO6:** Critically analyze historical economic data and debates, relating them to current economic challenges and the foundational issues of the Indian economy.
- **CO7:** Effectively present and communicate historical economic analyses and arguments through oral presentations and discussions.

COs –POs Mapping

POs \ COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	✓		✓	✓	✓			✓		✓		
CO2	✓	✓	✓	✓	✓	✓		✓	✓	✓		
CO3	✓		✓	✓	✓			✓	✓	✓		
CO4	✓	✓	✓	✓	✓	✓		✓	✓	✓		
CO5	✓	✓	✓	✓	✓	✓		✓	✓	✓		
CO6	✓	✓	✓	✓	✓	✓		✓	✓	✓		
CO7												✓

Public Finance

(Credit: 04, Theory: 03, Tutorial: 01)

[For Semester-V]

Course Learning Outcomes (COs):

- **CO1:** Explain core concepts of public finance including public goods, externalities, market failures, and the roles of public revenue (tax and non-tax), public expenditure, and public debt.
- **CO2:** Differentiate between progressive, regressive, and proportional taxation systems and apply the benefit and ability-to-pay principles of taxation.
- **CO3:** Understand basic concepts of Public Choice Theory and analyze the principles and challenges of Fiscal Federalism.
- **CO4:** Analyze the current issues of India's tax system, evaluate the working of monetary and fiscal policies in India, and critically examine the Indian budgetary system.
- **CO5:** Apply public finance theories to address specific economic problems and analyze policy implications related to government revenue, expenditure, and debt.
- **CO6:** Effectively present and communicate analyses and findings on public finance issues, enhancing confidence in the subject through presentations and discussions.

COs –POs Mapping

POs \ COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	✓	✓		✓	✓	✓			✓	✓		

CO2	✓	✓		✓	✓	✓			✓	✓		
CO3	✓	✓			✓	✓				✓		
CO4	✓	✓	✓	✓	✓	✓		✓	✓	✓		
CO5	✓	✓		✓	✓	✓		✓	✓	✓		
CO6	✓											✓

International Economics-I

(Credit: 04, Theory: 03, Tutorial: 01)

[For Semester-VI]

Course Learning Outcomes (COs):

- **CO1:** Explain and apply the classical theories of international trade (Absolute Advantage, Comparative Advantage) to understand the basis and direction of trade, including the concepts of arbitrage and terms of trade.
- **CO2:** Analyze the building blocks of trade theory, including community and trade indifference curves, offer curves, and key elasticities, to determine international equilibrium and understand the Gains from Trade theorem.
- **CO3:** Critically evaluate the Heckscher-Ohlin-Samuelson (HOS) model of trade, including its theorems (Stolper-Samuelson, Rybczynski, Factor Price Equalization), concepts like factor intensity reversal, and empirical challenges (Leontief Paradox).
- **CO4:** Analyze the partial and general equilibrium effects of various trade policies (tariffs, quotas, subsidies, VER), distinguishing between large and small economies, and understanding concepts like tariff wars and optimum tariff.
- **CO5:** Understand the components of the Balance of Payments accounts (autonomous and accommodating transactions) and grasp the basic concepts of fixed and flexible exchange rate systems.
- **CO6:** Solve quantitative problems and analyze theoretical scenarios related to international trade models and policies.
- **CO7:** Effectively present and communicate complex international economic models, analyses, and policy implications through oral presentations and discussions.

COs –POs Mapping

POs \ COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12

CO1	✓		✓	✓	✓		✓					
CO2	✓		✓	✓	✓		✓					
CO3	✓		✓	✓	✓		✓					
CO4	✓	✓	✓	✓	✓	✓	✓		✓	✓		
CO5	✓	✓	✓	✓	✓	✓						
CO6	✓	✓	✓	✓	✓	✓	✓		✓	✓		
CO7	✓											✓

Environmental & Resource Economics (I)

(Credit: 04, Theory: 03, Tutorial: 01)

[For Semester-VI]

Course Learning Outcomes (COs):

- **CO1:** Explain the interlinkages between economy and environment, understanding the concept of circular economy and various elements of environmental degradation from an economic perspective.
- **CO2:** Analyze market failures arising from externalities and public goods/bads, and evaluate the role of property rights and the Coase Theorem in addressing these failures.
- **CO3:** Assess different environmental regulations and policies, including command-and-control methods, economic incentives (Pigouvian fees, subsidies, tradable permits), and challenges in their design, monitoring, and enforcement.
- **CO4:** Understand and apply various methods for measuring the total economic value of environmental costs and benefits, including market-based, revealed preference (TCM, HPT), and stated preference (CVM) valuation techniques.
- **CO5:** Solve quantitative problems and analyze theoretical scenarios related to environmental externalities, policy instruments, and environmental valuation.
- **CO6:** Effectively present and communicate analyses and solutions for environmental economic problems and policies, building confidence in the subject through presentations and discussions.

COs –POs Mapping

POs \ COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	✓			✓	✓				✓	✓		

CO2	✓	✓		✓	✓	✓			✓	✓		
CO3	✓	✓		✓	✓	✓		✓	✓	✓		
CO4	✓			✓	✓		✓		✓	✓		
CO5	✓	✓		✓	✓	✓	✓	✓	✓	✓		
CO6	✓											✓

Public Economics (I)

(Credit: 04, Theory: 03, Tutorial: 01)

[For Semester-VI]

Course Learning Outcomes (COs):

- **CO1:** Explain the rationale for government intervention in a market economy by revisiting market failures, externalities, and the characteristics of various types of goods (public, merit, mixed, club, partial public).
- **CO2:** Analyze the optimal provision of pure public goods using models like Samuelson's and Lindahl Equilibrium, understanding the distinction between pure public goods and private goods, and the challenges of market failure in their provision.
- **CO3:** Evaluate different classifications and canons of taxation, principles of taxation (Benefit, Ability-to-Pay, Equal Sacrifice), and analyze the incidence, burden, and economic effects of taxation on work effort, risk-bearing, and savings, including the Laffer curve and optimal taxation concepts.
- **CO4:** Understand the meaning and classification of public expenditure, different types of government deficits (primary, fiscal, revenue, budget), the concept and effects of public debt (including Domar's model and Ricardian Equivalence), and sources of public borrowing.
- **CO5:** Grasp the concepts of Fiscal Federalism and tax devolution, analyzing the division of fiscal powers and responsibilities across different levels of government.
- **CO6:** Solve problems and analyze theoretical scenarios related to public goods provision, taxation, public expenditure, and public debt.
- **CO7:** Effectively present and communicate analyses and findings on public economics issues, enhancing confidence in the subject through presentations and discussions.

COs –POs Mapping

POs \ COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	✓	✓		✓	✓	✓			✓	✓		
CO2	✓	✓		✓	✓	✓			✓	✓		
CO3	✓	✓		✓	✓	✓			✓	✓		
CO4	✓	✓		✓	✓	✓			✓	✓		
CO5	✓	✓			✓	✓			✓	✓		
CO6	✓	✓		✓	✓	✓			✓	✓		
CO7	✓											✓

Rural Development

(Credit: 04, Theory: 03, Tutorial: 01)

[For Semester-VI]

Course Learning Outcomes (COs):

- **CO1:** Differentiate between economic growth and rural development, explain the basic elements of rural development, and understand the rationale for focusing on rural development in India.
- **CO2:** Analyze the size and structure of the Indian rural economy, including its population, resources, and the roles of agricultural and non-agricultural subsectors, identifying key challenges and opportunities.
- **CO3:** Apply and interpret various measures of rural development, including PQLI, HDI, Lorenz Curve, Gini Coefficient, and different concepts and measures of rural poverty.
- **CO4:** Evaluate the role and functioning of rural governance institutions, including Panchayati Raj institutions, rural credit systems (NABARD, RRB), Self-Help Groups (SHGs), microfinance, and NGOs in rural development.
- **CO5:** Examine the objectives, mechanisms, and impacts of key government programs for rural development in India, such as MGNREGA, PMAY-G, Mid-Day Meal Scheme, NRLM, NRHM, and PMGSY.
- **CO6:** Solve problems or analyze case studies related to rural development, applying theoretical concepts and policy frameworks to real-world challenges in rural India.
- **CO7:** Effectively present and communicate analyses, findings, and policy recommendations on rural development issues through oral presentations and discussions.

COs –POs Mapping

POs \ COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	✓		✓	✓	✓			✓	✓	✓		
CO2	✓		✓	✓	✓			✓	✓	✓		
CO3	✓		✓	✓	✓		✓	✓	✓	✓		
CO4	✓	✓	✓	✓	✓	✓		✓	✓	✓		
CO5	✓	✓	✓	✓	✓	✓		✓	✓	✓		
CO6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
CO7												✓