

LORETO COLLEGE
TIME PLAN
2024-2025
April 2025-July 2025

DSCC7: Statistics for Economics

Name of the Teacher: RUPA GHOSH
Initials: RG

Teaching Objective:

- To impart comprehensive knowledge about basic statistics and its use in Economics.
- To guide students to analyse and solve problems independently with logical reasoning.
- To prepare students for studying higher mathematical science.

4th Semester Topic-wise Time Plan- CCF

<i>Topics</i>	<i>Hours allotted</i>	<i>Topics (as per curriculum)</i>	<i>Teaching method</i>	<i>Learning outcome (output)</i>	<i>Assessment</i>
1	08	Elementary Probability Theory Sample spaces and events (concepts and definitions using set theory); Classical and Axiomatic definition of probability and their comparison. Conditional probability and Independence of Events, Pairwise and Mutual independence. Theorem of total probability, Theorem of compound probability, Bayes' Theorem and their applications.	Lecture and board work	To understand the basics of probability theory and to be able to compute sums on probability. To analyse different definitions for their comparison and contrast.	Continuous Internal Assessment, Internal Examinations and University Examinations.
Tutorial contact hours: 15 [for revision, doubt clearing, solving problems]					

LORETO COLLEGE
TIME PLAN
2024-2025
April 2025-July 2025

DSCC8: INDIAN ECONOMICS (I)

Name of the teacher: Dr. Rupa Ghosh

Initials: RG

Teaching Objectives:

- To impart comprehensive and higher knowledge about Indian Economy.
- To guide students to analyse and find probable solutions to various problems pertaining to Indian economy.
- To prepare students for studying higher Economics and subjects associated with Economics.

4th Semester Topic-wise Time Plan- Major CCF

<i>Topics</i>	<i>Hours allotted</i>	<i>Topics (as per curriculum)</i>	<i>Teaching method</i>	<i>Learning outcome (output)</i>	<i>Assessment</i>
1	15	Economic Development since Independence Growth and development under different policy regimes (from planning to market based development) ;Objectives, 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.	Lecture, board work and PPT presentation.	To understand the of development of Indian Economy since independence. To analyse the causes of success and failure; genesis of reforms and critical analysis of Structural changes in the post-reforms period.	Continuous Internal Assessment, Tutorial Examination and University Examinations.
2	09	Population and Human Development Demographic trends and issues, Education and health: Basic problems and Government measures, Right to Education (RTE) Act 2009	Lecture, board work and PPT presentation.	To gain knowledge about the demographic trends and issues and government measures.	Continuous Internal Assessment, Tutorial Examination and University Examinations.
3	09	Growth and Distribution: Policy Perspectives Trends in GDP and per capita GDP Growth, Poverty and Inequality Unemployment, Youth unemployment (School Transition to Work)	Lecture, PPT presentation , Flipped classroom and group discussion.	To understand the trends in GDP, per capita GDP and its implications on the Indian economy.	Continuous Internal Assessment, Tutorial Examination and University Examinations.
4	12	Economic Reforms in India Industrial Sector Reform Financial Sector Reforms Fiscal Sector Reforms Trade & External Sector Reforms Labour market Reforms Reforms in the Public Sector	Lecture, PPT presentation , Flipped classroom and group discussion.	To analyse each reforms and their implications sector wise.	Continuous Internal Assessment, Tutorial Examination and University Examinations
Tutorial contact hours: 15 [for revision, doubt clearing, solving problems]					

TIME PLAN 2025 (April –July 2025)

Name of the teacher: Dr. Suranjana Mitra

Initials: SM

Teaching Objective:

- To help students to understand the importance of Keynesian economics
- To help students to gain insight about Complete Keynesian Model in a closed economy
- To help them to understand the difference between the Classical and Keynesian system
- To help them to gain insight about the components of money supply realise the importance of balance sheet and government's budgetary operations
- To help students to understand the link between inflation and unemployment and the role of expectations

4th Semester Topic-wise Time Plan (Honours) (Macroeconomics II)

Topics	Hours allotted	Topics (as per curriculum)	Teaching method	Learning outcome (output)	Assessment
1 Income Determination in the short-run: IS-LM	10	Equilibrium, stability and comparative statics, crowding out, effects of fiscal and monetary policy	Lecture and discussion	Understand the concepts of IS-LM model	Tutorial and Assignment
2. Aggregate Demand and Aggregate Supply: The Complete Keynesian Model	10	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 fiscal and monetary policies, effects of wage-cut, unemployment equilibrium and its causes- possible solutions including real balance effect	Lecture and discussion	Understand the importance of CKM in the field of macroeconomics	Tutorial and Assignment

3. Keynes vs Classics	7	Keynesian vs Classical system, Hybrid models under Classical/Keynesian framework, Friedman's restatement of classical ideas	Lecture and discussion	Understand the hybrid models to make a comparative appraisal	Assignment
4. Money supply, Monetary Policy and Government Budgetary Operations	10	Measure of money supply with special reference to India (M1, M2, M3 and M4), Balance sheet review of money supplied by the banking sector as a whole, High-powered money, 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, money multiplier in the context of theory of money supply, Interest sensitivity of money supply and the slope of LM curve, monetary policy - Open Market Operations, Statutory Liquidity ratio, Bank rate, variable reserve ratio, repo rate government budget deficit - deficit financing and monetary policy	Lecture and discussion	Gain knowledge about the measures of money supply, balance sheet of the banking sector and government's budgetary operations and relate them to reality	Assignment

5. Inflation, Unemployment and expectations	8	Unemployment trade-off, Four Models of aggregate supply, Deriving the Phillips curve from aggregate supply curve, Role of adaptive expectations and rational expectations, disinflation, sacrifice ratio and policy ineffectiveness.	Lecture and discussion	Realise the importance of the relation between inflation and unemployment and the role of expectations.	Tutorial and Assignment
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TIME PLAN 2025 (April-July)

Name of the teacher: Dr. Suranjana Mitra

Initials: SM

Teaching Objective:

- To help them to develop basic ideas about the Classical system
- To help them understand the different theories such as the Quantity Theory of Money and Loanable Funds Theory
- To gain insight about Classical Dichotomy and Neutrality of Money
- To help them understand the concepts of inflation and the ways to control inflation

4th Semester Topic-wise Time Plan (Minor)

Macroeconomics

Topics	Hours Allotted	Topics as per curriculum	Teaching Method	Learning Outcome	Assessment
3. The Classical System	12	Basic ideas of Classical Macroeconomics, Say's Law and Quantity Theory of money, Loanable fund Theory, Classical Theory of Income and Employment determination, Full-employment and wage-price flexibility, Neutrality of Money	Lecture and Discussion	Gain insight about the different theories of Classical system and concepts of Classical Dichotomy and Neutrality of Money	Assessment and Assignment
Inflation	6	Concept and types - Inflationary gap, Demand- pull vs. Cost-push inflation, anti-inflationary policy	Lecture and Discussion	Understand the impact of inflation and the need to control inflation	Assignments

LORETO COLLEGE
SEMESTER - IV
TIME PLAN (April 2025 – Dec 2025)
PAPER : DSCC 5 [Mathematical Economics – 1]

Name of the teacher: Mainak Bhattacharjee
Initials: MB

Teaching Objective:

- To introduce with the basic tools and techniques of mathematics necessary for quantitative analysis of economic problems and issues
- To impart handling skills in mathematical modelling of economic perspectives

Topic-wise Time Plan

Topics	Hours allotted	Topics (as per curriculum)	Teaching method	Learning outcome (output)	Assessment
1. Set & their operations	10	Definition & Types of Set/Open & Closed Set / Countable & Uncountable set. Set operations : Union / Intersection/ Complementation Cartesian Product, Convex set.	Lecture demonstration and Interaction	Understanding the background of real-variable calculus and its applications in Economics	Assignments , Tutorial
2. Matrix Algebra	20	Linear Algebra, System of Equation, Matrices & Determinant, Rank of matrix, Solution methods: Cramer's Rule & Matrix Inversion Technique, Eigen Values & Eigen vectors	Lecture demonstration and Interaction	Developing knowledge in dealing with framing analytical intuition of economic behaviour and actions	Assignments, Tutorials

3.Linear Programing Problem	10	Formulation (Maximisation & Minimisation) , Economic interpretation, Graphical Approach to solution, Basic Feasible Solution, Slack & Surplus variables , Duality Theorems	Lecture demonstration and Interaction	Developing knowledge in dealing with framing analytical understanding of economic behaviour and actions	Assignments , Tutorials
4.Non-linear Programming (Application in Constrained Optimisation)	40	Formulation (with equality & inequality constraints), Lagrange multiplier method (First & Second order conditions) , Kuhn-Tucker method, Concept of Value Function, Envelope Theorem and its applications in theory of consumer behaviour & production & cost	Lecture demonstration and Interaction	Developing knowledge in dealing with framing analytical understanding of economic behaviour and actions	Assignments , Tutorials

LORETO COLLEGE
SEMESTER - IV
TIME PLAN (April 2025 – July 2025)
PAPER: DSCC- 7 [Statistics for Economics]

Name of the teacher: Mainak Bhattacharjee

Initials: MB

Teaching Objective:

- To introduce the concept of statistical probability and its several theoretical ramifications
- To introduce the concept of sampling , sampling distribution and some standard variants of the same

Topic-wise Time Plan ()

<i>Topics</i>	<i>Hours allotted</i>	<i>Topics (as per curriculum)</i>	<i>Teaching method</i>	<i>Learning outcome (output)</i>	<i>Assessment</i>
1. Theoretical distribution	15	Concept of Random Experiment and Random Variable, Types of Random Variable: Discrete & Continuous, Concept of Probability Mass Function (PMF) & Probability Density Function (PDF), Cumulative Distribution Function (CDF) Joint Probability Distribution, Marginal Distribution, Conditional Distribution, Theorem on Joint Distribution (Sum/ Product/ Iterative)	Lecture demonstration and Interaction	Understanding the application of statistical probability in stochastic estimation and modelling	Assignment, Tutorials

		Some theoretical distribution: Binomial / Poisson/ Normal			
2. Sampling theories & Sampling distributions	15	Concept of complete enumeration and sampling survey , concept and types of sampling and non- sampling errors, Ideas on population, parameter , sample and statistic. Concept of Random Sampling: Simple Random Sampling with & without replacement and their ramifications, Sampling Distributions: Standard Normal, Chi-square, t & F distribution	Lecture demonstration and Interaction	Understanding the rubrics application of statistical enumeration	Assignments, Tutorials

LORETO COLLEGE
SEMESTER - IV
TIME PLAN (April 2025 – July 2025)
PAPER: MN – 4 [Macroeconomics-I]

Name of the teacher: Mainak Bhattacharjee
Initials: MB

Teaching Objective:

- To introduce with aggregative aspects of economic issues or in short Macroeconomics.
- To impart knowledge in the theoretical foundation of Macroeconomics and contractions among various alternatives schools of thought.

Topic-wise Time Plan

Topics	Hours allotted	Topics (as per curriculum)	Teaching method	Learning outcome (output)	Assessment
1.Introduction to Macroeconomics and National Income Accounting	10	Definition of Macroeconomics and school of thoughts, Concepts of GDP, GNP, NDP, NNP at factor and market price, derivation of personal income & personal disposable income from macro-estimates, approach to estimation of GDP – income, valued-added and expenditure, their equivalence	Lecture demonstration and Interaction	Understanding the concepts of Macroeconomic accounting and their application.	Assignment, Tutorials
2.Basic theory of Investment	5	Determinants of investment, concept of Marginal Productivity of Capital, concept of Marginal efficiency of investment and Marginal efficiency of capital	Lecture demonstration and interaction	Understanding the significance of investment as a factor explaining business cycles	Assignments, Tutorials
3.Inflation	5	Concepts and types : Demand-pull and cost-push, Anti-inflationary policy	Lecture demonstration and interaction	Understanding the inflation as a phenomenon of price instability and role of macroeconomic policy in maintaining the same	Assignments, Tutorials

LORETO COLLEGE
TIME PLAN APRIL 2025 - JULY 2025
4th Semester Topic-wise Time Plan
PAPER: ECOM-DSCC5
Mathematical Economics (I)

Name of the teacher: Nilavo Roy

Initials: NR

Teaching Objectives:

1. To develop an understanding of mathematical functions, derivatives, and optimization techniques relevant to economic analysis.
2. To enable students to apply mathematical tools to solve economic problems involving single and multivariable functions, with a focus on real-world applications.

Topics	Hours Allotted	Topics (as per curriculum)	Teaching Method	Learning Outcome (Output)	Assessment
Unit 11.1 Functions of One Real Variable and Several Variables	10	- Geometric properties of functions: increasing/decreasing, convex/concave, quasi-convex/concave - Domain and range, monomial and polynomial functions - Linear and non-linear functions, explicit and implicit functions - Limit and continuity (basic theorems without proof) - First and second-order differentiation, L'Hospital's Rule - Slope and curvature of functions - Graphs: linear, quadratic, polynomial, exponential, logarithmic - Marginal and average functions, elasticity - Partial and total derivatives, Hessian matrix - Homogeneous and homothetic functions, Euler's theorem - Implicit function theorem, Jacobian - Convexity/concavity and quasi-convexity/quasi-concavity - Applications: utility, demand, production functions, comparative statics	a) Interactive Lecture b) Demonstration c) Problem Solving	- Understanding of mathematical functions and their properties - Ability to apply single and multivariable calculus in economic analysis - Acquaintance with economic applications of derivatives and function types	Tutorials and Assignments
Unit 11.2 Single Variable Optimization	10	- Local and global maxima/minima - Stationary points, boundary vs. interior solutions - First and second-order conditions - Applications: profit maximization and effects of various taxes in perfect competition	a) Interactive Lecture b) Demonstration c) Problem Solving	- Ability to apply optimization techniques to real-world economic scenarios - Understanding of maximization/minimization in a single-variable context	Tutorials and Assignments
Unit 11.3 Unconstrained Optimization (Two Variables)	5	- Stationary points and extreme values - Hessian determinant, positive/negative definiteness - Applications: profit maximization with factor inputs under competitive production	a) Interactive Lecture b) Demonstration c) Problem Solving	- Ability to analyze and solve optimization problems involving multiple variables - Acquaintance with mathematical tools like Hessian matrix in economic contexts	Tutorials and Assignments

LORETO COLLEGE
TIME PLAN APRIL 2025 - JULY 2025
4th Semester Topic-wise Time Plan
PAPER: ECOM-DSCC7
Statistics for Economics

Name of the teacher: Nilavo Roy
Initials: NR

Teaching Objectives:

1. To develop an understanding of estimation methods and hypothesis testing in the context of statistical inference.
2. To enable students to apply statistical tools such as confidence intervals and test statistics for analyzing economic data.

Topics	Hours Allotted	Topics (as per curriculum)	Teaching Method	Learning Outcome (Output)	Assessment
Unit 13.4 Statistical Inference	15	- Basic ideas of estimation and testing - Point estimation: criteria of a good estimator (unbiasedness, minimum variance, mean square error, consistency, sufficiency) - Estimation methods: Ordinary Least Squares, Maximum Likelihood Estimation, Method of Moments - MLEs for Binomial, Poisson, and Normal distributions - Interval estimation: confidence intervals for mean, standard deviation, and population proportion - Hypothesis testing: null and alternative hypotheses, Type I & II errors, power, p-value - Tests for mean, standard deviation, and population proportion	a) Interactive Lecture b) Demonstration c) Problem Solving	- Understanding of estimation and hypothesis testing principles - Ability to compute and interpret confidence intervals and test statistics - Acquaintance with estimation techniques like OLS and MLE	Tutorials and Assignments

