Ist Semester Lesson Plan

Sl No	Name of Teacher	Number of class	Time Period
1	Dr Jayanta Hazra	10	November-December

Exploring the subject matter of
Economics

Why study economics?
Scope and method of economics;
The economic themes: scarcity and efficiency;
Thinking like an economist: the question of what to produce, how to produce and how to distribute output;
Marginal benefits and marginal costs;
Opportunity cost (private and social);
The basic competitive model; prices,
Property rights, the role of property rights in markets and profits;
Incentives and information;
Rationing; opportunity sets;
Economic systems;
Reading and working with graphs.

Sl No	Name of Teacher	Number of class	Time Period
2	Babar Ali Midda	145	November-January

Input Markets
Theory of rent-Ricardo, Marshall, and Modern theory of rent;

Labour and land markets - basic concepts (derived demand, productivity of an input, marginal productivity of labour, marginal revenue product);

Demand for labour;

Input demand curves;

Shifts in input demand curves,

Competitive labour markets;

Labour market and public policy.

Preliminaries

Logic and proof techniques;
Sets and set operations; relations;
Functions and their properties;
Number systems.
Convex sets;
Geometric properties of functions: convex functions, their characterizations, properties and applications;
Further geometric properties of functions: quasi-convex functions, their characterizations, properties and applications;
Limit and continuity.

Functions of one real variable

Continuous functions of different types and their graphs- quadratic, polynomial, power, exponential, and logarithmic;
Derivatives of first and second order and their properties;
Convex, concave and linear function.
Application in economics- concept of marginal.

Single variable optimization

Local and global optima;
Geometric characterizations;
Characterizations using calculus;
Applications in Economics- profit maximization and cost minimization.

Integration of functions

Integration of different types of functions;Methods of Substitution and by parts;Applications in economics- obtaining total from the marginal.

Difference Equations

Finite difference;Equations of first and 2nd orders and their solutions;Application in Economics- Cobweb model.

Elementary Probability Theory

Sample space and events;Probability axioms and properties;Counting techniques;Conditional probability;Bayes' rule and independence of events;Random variable and probability distributions- Discrete and continuous. Expectation of a random variable.

Sl No	Name of Teacher	Number of class	Time Period
3	Dr Manoranjan Maji	15	November-January

Supply and Demand: How Markets Work, Markets and Welfare

1. Elementary theory of demand
Determinants of household demand,
Market demand, and shifts in the market demand curve
2. Elementary theory of supply
Factors influencing supply,
Derivation of the supply curve, and shifts in the supply curve
3. The elementary theory of market price
Determination of equilibrium price in a competitive market;
The effect of shifts in demand and supply;
The excess demand function:
Existence, uniqueness, and stability of equilibrium;
Consumer surplus,
Producer surplus and efficiency of competitive markets (graphical approach);
The idea of market failure;
Elasticities and their applications.
4. Government intervention and their impact on market equilibrium and efficiency controls on prices (Price ceilings and price floors);
Indirect taxation.

Sl No	Name of Teacher	Number of class	Time Period
4	Rajiv Dey	25	November-January

The Households

The consumption decision - budget constraint,
Consumption and income and price changes,
Demand for all other goods and price changes;
Description of preferences- most preferred bundle and its properties;
Consumer‘s optimum choice;
Income and substitution effects;Marshallian and compensated demand curves;Price consumption curve,Income consumption curve, and Engel curve;Homothetic tastes;Labour supply and savings decision - choice between leisure and consumption

Sl No	Name of Teacher	Number of class	Time Period
5	Madhusree Mukherjee	45	November-January

The Firm and Perfect Market Structure
Defining a firm- firm's legal forms;Profit maximization hypothesis;Contractual theories and organizational theories of firms (concepts only); Behaviour of profit maximizing firms and the production process;Short run costs and output decisions;Costs and output in the long run.
Imperfect Market Structure
Monopoly and anti-trust policy;Measuring monopoly power;Government policies towards competition;Various types of imperfect competition.

3rd Semester Lesson Plan

Sl No	Name of Teacher	Number of class	Time Period
1	Dr Jayanta Hazra	60	September-January

Consumer
Theory

Cardinal utility;
Preference: ordering and properties of ordinal utility;
existence of utility functions,
different utility functions and their properties,
compensating and equivalent variation,
Slutsky equation;
consumption-leisure choice and labour supply;
choice under uncertainty (expected utility and risk aversion),
inter- temporal choice and savings decision;
revealed preference approach.
Production and
Costs
Technology- general concept of production function;
returns to factor and returns to scale,
isoquants and diminishing rate of factor substitution –
elasticity of substitution –
some examples of technology (fixed proportion, perfect substitute,
Cobb– Douglas Production Function,
CES Production Function),
General concept of homogenous and homothetic production function and their properties;
production with one and more variable inputs;

isocost line and firms equilibrium and expansion paths;
short run and long run costs;
cost curves in the short run and long run;
relation between short run and long run costs.

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2	Babar Ali Midda	120	September-January

Descriptive Statistics
Presentation of Data;
Frequency Distribution;
Measures of central tendency,
Dispersion,
Moments,
Skewness and Kurtosis;
Bivariate Frequency Distribution- correlation and regression.
Univariate Probability Distribution

Discrete distribution-Binomial, Poisson;
Continuous Distributions-Uniform, Normal, Exponential (Properties of each distribution; mean and variance).
Jointly Distributed Random Variables
Density function of Bivariate normal distribution and obtaining means, variances, and correlation coefficients.
Sampling

Concept of sampling and random sampling.
Principal steps in a sample survey;
methods of sampling;-SRSWR, SRSWOR,
Stratified sampling.
Sampling vs non-sampling error
Index Number
Price and quantity index number;
Different formula;
Tests for an ideal index application
Cost of living index; Real GDP
Estimation
Parameters and statistics;
Point estimation-Properties of a good estimator;
Maximum Likelihood Method and the method of moments;
Estimation of population parameters using SRSWR and SRSWOR;
Interval estimation.

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3	Dr Manoranjan Maji	80	September-January

Aggregate Demand and Aggregate Supply
Derivation of aggregate demand assuming price flexibility**;**
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;
Unemployment and its causes- possible solutions, including real balance effect and wage cut policy.
Inflation, Unemployment and Expectations

Inflation and unemployment trade-off
Short run and long- run Phillips curve under adaptive expectations
outcome under rational expectations (non-rigorous).

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4	Rajiv Dey	40	September-January

Income Determination in the short-run
1. **Simple Keynesian System:**
Multipliers;
equilibrium in both closed and open economy and stability;
autonomous expenditure,
balanced budget, and net exports;
paradox of thrift.
2. **IS-LM Model** -
equilibrium,
stability and comparative statics;
effects of fiscal and monetary policies,
real balance effects;
IS-LM in the open economy under fixed and flexible exchange rate with perfect and imperfect capital mobility (Mundell-Fleming model).

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5	Madhusree Mukherjee	60	September-January

Competitive
Equilibrium
Short run and long run equilibrium;
determination of the supply curve of the firm and the industry: with reference to external economies and diseconomies of scale.
Input market in perfect competition
Derived demand for input,marginal product and marginal revenue product,input demand for competitive firm and competitive industry,returns to scale and product exhaustion

5th Semester Lesson Plan

Sl No	Name of Teacher	Number of class	Time Period
1	Dr Jayanta Hazra	120	September-January

Basics of trade theory
Arbitrage as basis and direction of trade;
Fundamental sources of cross-country price differences and arbitrage;
Concept of comparative advantage;
Externalities, regulation and perverse comparative advantage;
International equilibrium; offer curves,
ToT and stability;
Gains from Trade (GFT) Theorem;
Concepts of Production possibility Frontier and Community Indifference curves; Illustration of GFT;
Decomposition of GFT;
Substitution possibilities and magnitude of GFT.
Technology and Trade (Ricardian Model)
Comparative versus Absolute Advantage,
One-factor economy, production possibility frontier,
Relative demand and relative supply,
Terms of trade;
Trade in Ricardian world,
Determination of intermediate ToT,
Complete specialization & GFT
Factor Endowment & Trade (Heckscher-Ohlin-Samuelson Model)
H-O theorem and physical vs. price definitions of factor abundance;
Properties of the HO model
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 (Rybczysky's theorem);
Proof of HO theorem;
Taste bias and invalidation of HO theorem;
Empirical studies- Leontief Paradox;
Effects of trade on factor price and income distribution,
factor price equalization,
factor intensity reversal & factor price equalization.
Trade Policy

Partial Equilibrium Analysis
Tariff - cost–benefit,
Quota,

Quota- Tariff equivalence & non-equivalence,
Effects of tariff, 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,
Offer curve and ToT,
Tariff ridden offer curve,
Tariff war,
Optimum tariff for large economy,
Metzler's Paradox.

Balance of Payments & Exchange Rate:

Balance of Payment accounts in an open economy;
Determination of National Income,
Transfer problem,
Introduction of foreign Country & repercussion effect
Open economy multiplier with & without repercussion effect;
Fixed &Flexible Exchange Rate:
Adjustment of demand and supply of Foreign Exchange,
Effect of devaluation,
Effects of exchange rate on domestic prices and ToT,
Marshall-Lerner Condition,
J-Curve effect.

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2	Babar Ali Midda	50	September-January

WTO and India
Different rounds of trade negotiations 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, SEZ Policies and Performance in Agriculture
Growth; productivity; agrarian structure and technology; capital formation; trade; food security and food policy, pricing and procurement; globalization and Indian agriculture. Policies and Performance in Industry
Growth; productivity; diversification; small scale industries; public sector; competition policy; foreign investment, globalization and Indian industry. Trends and Performance in Services
Formal and Informal Sectors, banking and insurance; trade in services.

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3	Dr Manoranjan Maji	60	September-January

Taxation:

Classification of Taxes;
Canons 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;
Optimal Taxation

Public Expenditure and Public Debt

Meaning and Classification of Public Expenditure;
Government budget and its types;
Government expenditure and tax multipliers,
Balanced budget multiplier;
Fiscal Federalism in India;
Meaning of Public Debt;
Sources of Public Borrowings: internal and external borrowing;
Effects of Public Debt.

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4	Rajiv Dey	50	September-January

Role of Health and Education in Human Development
Importance in poverty alleviation; health and education outcomes and their relationship with macroeconomic performance. Microeconomic Foundations of Health Economics
Demand for health; uncertainty and health insurance market; alternative insurance mechanisms; market failure and rationale for public intervention; equity and inequality. Evaluation of Health Programs
Costing, cost effectiveness and cost-benefit analysis; burden of disease. Health Sector in India: An Overview
Health outcomes; health systems; health financing. Education: Investment in Human Capital
Rate of return to education: private and social; quality of education; signaling or human capital; theories of discrimination; gender and caste discrimination in India. Education Sector in India: An Overview
Literacy rates, school participation, school quality measures.

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5	Madhusree Mukherjee	60	September-January

Nature and Scope of Public Economics
Definition and Scope of Public Economics;
Externalities,
Market Failure and Government Intervention;
Coase Theorem;
Public Expenditure to finance Development.
Theory of Public Good
Overview of Public Good;
Characteristics of Pure Public Good;
Distinction between Pure Public Good and Private Good;
Market Failure in case of Pure Public Good;
Optimal provision of Public Goods;
Private Provision and Public Provision of Public Goods;
Lindahl Equilibrium,
Voting Equilibrium.

Note: Per class is equivalent to one hour, Class is equivalent to online class + offline class.