LESSON PLAN, 2022-2023

ECONOMICS HONOURS (ECOA)

SEMESTER 1

Core Course 1: Introductory Microeconomics

TOPIC	NUMBER OF CLASSES
IC: Exploring the subject matter of Economics • Scope and methods of economics ; • The economic problem and questions of economics • Distinction between Microeconomics and Macroeconomics • The basic competitive model • Property rights and Profits • Incentives and Information ; Rationing • Economic system	 1 1 1 2 1 1 1
KN: Supply and Demand: How Markets Work, Markets and Welfare • Markets and competition • Determinants of individual supply and demand, Market demand/supply curve • Demand and supply schedule and curve • Price and quantity determination by demand –supply • Elasticity and its application • Controls on prices • Taxes and costs of taxation • Consumer and producer surplus • Efficiency of the markets Production and Cost • Production function: Total, Average and Marginal products • Isoquants and economic region of production • Elasticity of substitution, output elasticity • Iso-cost curves • Cost minimisation and output maximisation • Expansion path • Fixed coefficient production function • Homogeneous production function, Economies of scale: IRS,CRS,DRS,	 1 1 1 1 3 1 2 1 1 1 2 1 1 1 1 1 1 2 1 1 2

Homothetic production function • Cobb-Douglas production function • CES production function • Derivation of cost function from production function • Short run and long run cost curves Market Structure • Different types of market structures • Perfect Competition • Monopoly • Monopolistic Competition • Oligopoly Tutorial/ other activities	 4 2 2 2 8
DB: Consumer Behaviour The consumption decision—budget constraint, consumption and income/ price changes, demand for all other goods and price changes Description of preferences, representing preference with indifference curves Properties of indifference curve Consumers optimum choice Consumers optimum choice—continuation Income and substitution effects (Hicks and Slutsky) Ordinary and compensated demand curves Inferior goods and Giffen goods Price-consumption and Income-consumption curves Tutorial/other activities	10 3 4 1 4 3 2 3 7
TOTAL CREDIT	90

Core Course 2: Mathematical Methods For Economics-I

TOPIC	NUMBER OF CLASSES
RR Definition of a set and discussion of related concepts; Set types; Operations on Sets Nested sets; Cartesian product Explicit and implicit functions; Definitions; Concepts of range, 'domain and 'mapping' Types of functions and correspondences (polynomial, exponential, logarithmic, power); Number systems and Concept of Euclidean Space. Vector spaces: algebraic and geometric properties, scalar products, norms, orthogonality sums linear transformations: properties, matrix representations and elementary operations; Sums systems of linear equations: properties of their solution sets determinants: characterization, properties and applications. Number systems Tutorial/Student's activity	2 1 1 2 1 2 5 2 3 3 4
SB: Other Topics • Concepts of various types of series (arithmetic, geometric, logarithmic, exponential, Taylor's and McLaurin's) • Brief review of trigonometric functions and associated curves Single-variable optimization Total, Average and Marginal products • Geometric properties of functions: convex functions • Distinction between concave and convex functions; their characterizations and applications • Local and global optima (maxima and minima); geometric characterizations, characterizations using calculus and applications • Applications: Equilibrium under cardinal utility theory;	5 3 2 4 5 4

Maximization of Revenue and Profit, Minimization of cost of production in short run Multi-variable optimization • Free and constrained optimization • Examples of constrained optimization from consumer and producers theories • Static and dynamic optimization problems; applications • Applications: Equilibrium under cardinal and ordinal utility theory; Maximization of Profit in different market form, Minimization of cost of production in long run. Tutorial/ Other Activities	 2 3 5 5 8
IC: Brief review of Differential and Integral Calculus • Limits and Continuity • Derivatives ; Differentiable Functions ; Second and higher order derivatives; Properties; • Level curves, slope and curvature of functions ; • Integral ; Area under curve • Applications Tutorial / Other Activities	 2 3 1 2 7 3
TOTAL CREDIT	90