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No**SUBJECT: ECONOMICS****SEMESTER: ONE****COURSE NAME: INTRODUCTORY MICROECONOMICS [MAJOR]****COURSE CODE: UECOMAJ11001****FULL MARKS: 75****Module-I: Demand and Supply: Determination of Market Price [9 hrs]**

Determinants of individual demand and supply; Law of Demand and Law of Supply; demand and supply curve, market versus individual demand and supply, and shifts in the demand and supply curve. The concept of elasticity of demand, point and arc elasticity, cross-price elasticity and income elasticity of demand, elasticity of supply. Consumer Surplus and Producer Surplus; Elementary theory of market price: Determination of equilibrium price in a competitive market

Module-II: Consumer Behaviour [5 hrs]

Cardinal utility theory: Law of Diminishing Marginal Utility, derivation of Marshallian demand curve. Ordinal utility theory: Indifference curves and their properties, budget line, Consumer's equilibrium.

Module-III: Producer Behaviour [8 hrs]

The concepts of Total Revenue, Marginal Revenue and Average Revenue, Production function, the law of variable proportion, fixed co-efficient production function, returns to a factor, returns to scale. iso-quant and its properties, and iso-cost line—the marginal rate of technical substitution, equilibrium of the producer.

Module-IV: Theory Cost [5 hrs]

Various concepts of Cost, Fixed and Variable Costs, Average and Marginal Costs, derivation of short-run cost, long-run cost, the shape of long-run average cost, Economies, and Dis-economies of Scale.

Module-V: Linear Algebra and Applications in Microeconomics [8 hrs]

Ingredients of a Mathematical Model, Real Number System, Concepts of Sets, Relations, Functions, Types of Functions, functions of Two or More Independent Variables, Simultaneous Equations. Application of elementary algebra in Microeconomics

Module-VI: Basic Calculus and Applications in Microeconomics [10 hrs]

Derivative of a Function, Rules of Differentiation, Partial and Total Differentiation, Euler's Theorem. Application in Economics: Demand Function, Elasticity of Demand, Marginal Revenue, Marginal Utility, Marginal Cost, Slope and Curvature of Indifference Curve, Point of Inflexion, Returns to Scale, Homogeneous Functions and their Properties, Cobb-Douglas Production Function and their Properties. Applications of elementary calculus in Microeconomics.



Tutorial Classes: [15 hrs]

Tutorial classes are meant to clarify better the contents of the course. Such classes are meant to promote teacher-student academic interactions and help to build a student's confidence and self-esteem.

Continuing Evaluation:

The course instructor will finalise the modalities of the continuing evaluation. A few suggestions for continuing evaluation are (a) written examination, (b) take-home assignment, and (c) presentation on the topic suggested by the course instructor.

Suggested Readings:

- Acemoglu, D., Laibson, D. and List, J.A. 2019. Microeconomics (1e), Pearson.
- Gravelle, H. and Rees, R. 2006. Microeconomics, Pearson
- Henderson, J.M. and Quandt, R.E. 1980. Microeconomic Theory, McGraw Hill.
- Hoy, M., Livernois, J., McKenna, C., Rees, R. and Stengos, T. 2022. Mathematics for Economics, The MIT Press.
- Koutsoyiannis, A. 1979. Microeconomic Theory, Palgrave Macmillan
- Mankiw, N. Gregory 2003. Economics: Principles and Applications, India edition by South Western.
- Pindyck, R.S. and Rubinfeld, D.L. 2018 Microeconomics, Pearson Education Asia.
- Salvatore, D. 2003. Microeconomics: Theory and Applications, Oxford University Press.
- Varian H.R. 2019. Intermediate Microeconomics: A Modern Approach, W.W. Norton & Company.
- Chiang, A. C. and Wainwright K. 2005 Fundamental Methods of Mathematical Economics, McGraw Hill (New Edition).

Module VI: Correlation and Regression [10 hrs]

Definitions, Bivariate data, Bivariate frequency distribution, Scatter Diagram, Covariance, the measure of association, Coefficient of Simple Correlation, Properties, and the calculation method, Concept of Rank correlation, Spearman's Rank Correlation, Measure of influence, Simple Linear Regression, properties of linear regression, Least Squares and Normal Equations, and determination of regression coefficient.