Dr. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY, AURANGABAD
DEPARTMENT OF ECONOMICS

M.A. (Economics) SYLLABUS

Course Code No.: ECO-313	**No. of Credits:04**	**Semester: III**
Course Title:	**MATHEMATICAL ECONOMICS-I**	

Course Objectives:

1. To develop the mathematical analysis skills in economics
2. To give students deeper understanding and working knowledge of mathematics.
3. To increase the use of mathematical tools in economics analysis.

Unit	**Course Content**	**Periods**
I	Consumer Theory 1.1 Assumptions of modern consumer theory(1) 1.2 Types of function- Separable and additive utility functions, indirect utility function , homogenous and homothetic utility function . linear expenditure system,(4) 1.3 Utility maximization with different utility functions-substitution method , Lagrange Multipliers Method; Envelope Theorem; Applications (6) 1.4 Slutsky equation. (2) 1.5 Compensated demand function.	13
II	Production Theory 2.1 Concepts : production function, product curve, Isoquants, elasticity of substitution input demand function (2) 2.2 Production Functions - homogeneous, non-homogeneous and homothetic production function Cobb-Douglas production function- properties , importance , criticisms (5) 2.3 CES production functions- production function- properties , importance , criticisms (5)	12
III	**Theory of the Firm** 3.1 Relationship between production function cost function. 3.2 Derivation of short-run and long-run cost functions(3) 3.3Optimization Behavior-constrained output maximization constrained cost minimization (5) 3.4 Analysis of joint profit maximization in multiproduct firm – constraints Revenue Maximization, profit maximization (4)	12
IV	**Market Equilibrium** 3.1 Price & output determination in perfect competition(2) 3.2 Monopoly: price discrimination, market discrimination, taxation and monopoly output (4) 3.3 Monopsony, Monoplistic competition(3) 3.4 Duopoly & Oligopoly- The quasi-competitive solution, Collusion solution , Cournot solution, Stackelberg solution (4) 3.5 Game Theory (3)	12
V	Welfare Economics 5.1 Nature, scope, limitations (3) 5.2 Parato optimality (3) 5.3 Lindahal Eqilibrium (2) 5.4 Social Welfare functions (3)	11

Learning Outcomes

1.Student display mathematical analysis skills in Economics.
2.Students show better understanding and working knowledge of Mathematics
3.Students use mathematical tools in economic analysis.

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