B.A. (HONOURS) ECONOMICS

(Three Year Full Time Programme)

COURSE CONTENTS

(1ST SEMESTER ONLY)

(Effective from the Academic Year 2011-2012 onwards)

DEPARTMENT OF ECONOMICS
UNIVERSITY OF DELHI
DELHI - 110007

Course: B.A. (Hons.) Economics

Semester I	Paper 1: Introductory Microeconomics
	Paper 2: Mathematical Methods for Economics-I
	Paper 3: Statistical Methods in Economics-I
	Paper 4: Concurrent – Qualifying Language

SEMESTER BASED UNDER-GRADUATE HONOURS COURSES

Distribution of Marks & Teaching Hours

The Semester-wise distribution of papers for the B.A. (Honours), B.Com. (Honours), B. Com., B.Sc. (Honours) Statistics and B.Sc. (Honours) Computer Science will be as follows:

Type of Paper	Max. Marks	Theory Exam.	I.A.	Teaching per week
Main Papers	100	75	25	5 Lectures 1 Tutorial
Concurrent Courses	100	75	25	4 Lectures 1 Tutorial
Credit Courses for B.Sc.(Hons.) Mathematics	100	75	25	4 Lectures 1 Tutorial

- Size of the Tutorial Group will be in accordance with the existing norms.
- The existing syllabi of all Concurrent/Credit Courses shall remain unchanged.
- The existing criteria for opting for the Concurrent /Credit Courses shall also remain unchanged.

B.A. (Hons) Economics
University of Delhi

COURSE 01: INTRODUCTORY MICROECONOMICS
B.A. (HONS.) ECONOMICS, FIRST SEMESTER

1. Exploring the subject matter of Economics

Why study economics? Scope and method of economics; The economic problem: Scarcity and choice; the question of what to produce, how to produce and how to distribute output; Science of economics; The basic competitive model; Prices, Property rights and Profits; Incentives and information; Rationing; Opportunity sets; Economic systems; Reading and working with graphs.

2. Supply and Demand: How Markets Work, Markets and Welfare

Markets and competition; Determinants of individual demand/supply; Demand/supply schedule and demand/supply curve; Market versus individual demand/supply; Shifts in the demand/supply curve, demand and supply together; How prices allocate resources; Elasticity and its application; Controls on prices; Taxes and the costs of taxation; Consumer surplus, producer surplus and the efficiency of the markets.

3. The Households

The consumption decision - budget constraint, consumption and income/price changes, demand for all other goods and price changes; Description of preferences (representing preferences with indifference curves), properties of indifference curves, consumer's optimum choice; Income and substitution effects; Labour supply and savings decision -- choice between leisure and consumption.

4. The Firm and Perfect Market Structure

Behaviour of profit maximizing firms and the production process; Short run costs and output decisions; Costs and output in the long run.

5. Imperfect Market Structure

Monopoly and anti-trust policy, government policies towards competition; Imperfect competition.

6. Input Markets

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; and labour markets and public policy.

Readings

1. Karl E. Case and Ray C. Fair (2007), *Principles of Economics*, 8th edition, Pearson Education Inc.

2. N. Gregory Mankiw (2007), *Economics: Principles and Applications*, 4th edition, India edition by South-Western, a part of Cengage Learning, Cengage Learning India Private Limited.

3. Joseph E. Stiglitz and Carl E. Walsh (2006), *Economics*, International Student Edition, 4th Edition, W.W. Norton & Company, Inc., New York.

COURSE 02: MATHEMATICAL METHODS FOR ECONOMICS I
B.A. (HONS.) ECONOMICS, FIRST SEMESTER

1. Preliminaries

Elements of logic and proof; converse and contrapositive, necessary and sufficient conditions, proof by contradiction, mathematical induction. Sets and set operations. Ordered pairs, Cartesian products of sets. Relations. Functions: one-to-one and onto functions, composite functions, the inverse function. The real numbers: natural numbers, integers, rational and irrational numbers; absolute value and intervals; inequalities.

2. Functions of One Real Variable

Examples (linear functions, polynomials, etc.) and elementary curve types. Sets of points in the plane determined by equations or inequalities.

Infinite sequences and series: the concepts of convergence and limits; algebraic properties of limits. Present discounted values and elements of investment analysis.

The limit of a function at a point. Continuity. The intermediate value theorem.

3. Differential Calculus (one-variable)

The derivative of a function. Differentiability and continuity. Techniques of differentiation; sums, products and quotients of functions; composite functions and the Chain Rule. Inverse functions. Implicit differentiation. Second and higher order derivatives. Concavity and convexity of functions: Jensen's inequality; the second derivative criterion. Points of inflexion. Differentials and linear approximation. Taylor's theorem and polynomial approximation. Indeterminate forms and L'Hopital's Rule.

Exponential and Logarithmic functions. Logarithmic differentiation. Examples of the use of the exponential and logarithmic functions (proportional rates of change, elasticities, continuous compounding etc.)

4. Optimization (Functions of one variable)

Optimization: stationary points, local and global optima; location of turning points and points of inflexion using derivatives; the role of concavity and convexity. Applications.

Readings

Knut Sydsaeter and Peter J. Hammond (2005), *Mathematics for Economic Analysis*. Pearson Educational Asia: Delhi, 4th Indian reprint, Chapters 1 to 9, excluding Section 6.7 of Chapter 6.

COURSE 03: STATISTICAL METHODS IN ECONOMICS I

B.A. (HONS.) ECONOMICS, FIRST SEMESTER

1. Elementary Distribution Theory

Univariate frequency distributions, measures of location, dispersion, first four central and non-central moments; skewness and kurtosis.

2. Elementary Probability Theory

Concepts of sample space and events, probability of an event; addition and multiplication theorems; conditional probability and independence of events; Bayes rule.

3. Probability distributions

Concept of a random variable, joint, marginal and conditional distributions; mean and variance of a random variable; covariance and correlation; independence of random variables; uniform, binomial and normal distributions.

4. Index Numbers

Concept of an index number, Laspeyres, Paasche's and Fisher's index numbers; time reversal, factor reversal and circular tests; chain base index; problems in constructing index numbers; splicing, base shifting; and use of index numbers for deflating other series.

Readings

1. P.H. Karmel and M. Polasek (1978), *Applied Statistics for Economists,* 4th edition, Pitman.

2. Allen Webster (1997), *Applied Statistics for Business and Economics: An Essential Version*, 3rd edition, McGraw-Hill.

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CONCURRENT – QUALIFYING LANGUAGE