

School of Undergraduate Studies

Ambedkar University Delhi

Course Outline

Time Slot-_____

Course Code: SUS1EC107

Title: Mathematical Methods for Economics

Type of Course: Discipline (Economics)

Cohort for which it is compulsory: BA Honours Economics

Cohort for which it is elective: All other Majors

No of Credits: 4

Semester and Year Offered: IV

Course Coordinator and Team: TBA

Email of course coordinator:

Pre-requisites: Microeconomics II

Aim: This course shall provide a basic training to students in the mathematical techniques commonly used in economic analysis along with some of their applications.

Brief description of modules/ Main modules:

Review of Sets, Logic and Methods of Proof.

Review of two and three dimensional coordinate systems.

Linear Algebra: Systems of linear equations, matrices and determinants, vector spaces and vector operations.

The calculus of one variable: limit and continuity in functions; derivatives; analysis of curves; local and global optimization; ordinary differential equations; indefinite and definite integrals; polynomial approximations and Taylor series.

Multivariable calculus: partial differentiation and total differentials; tangent planes and linear approximations; constrained and unconstrained optimization; convex functions and sets.

Assessment Details with weights:

Reading List:

Alpha C. Chiang and Kevin Wainwright – Fundamental Methods of Mathematical Economics, 4th Edition, McGraw-Hill, 2005.

Carl P. Simon and Lawrence P. Blume - Mathematics for Economists, W.W. Norton, 1994.

ADDITIONAL REFERENCE: