PROGRAM	Bachelors Of Commerce(Hons)
SEMESTER	V
COURSE TITLE	Essential Mathematics for Economic Analysis
COURSE CODE	04CH0581
COURSE CREDITS	04
COURSE DURATION	48 Hrs (48 sessions of 60 minutes each)

COURSE OUTCOMES:

- Work with matrices and determine if a given square matrix is invertible.
- Learn to solve systems of linear equations and application problems requiring them.
- Learn to compute determinants and know their properties.
- Learn to find and use values of a matrix in economics.
- Learn about and work with vector spaces and subspaces.

Teaching and Examination Scheme

Teaching Scheme (Hours)			Credits	Internal Marks (50%)		End-Semester Examination (50%)			Total Marks
Theory	Tutorial	Practical		IA	CSE	Theory	Practical/Viva	Term Work (TW)	
4	0	0	4	30	20	50	0	0	100

Course Contents:

Unit No	Unit / Sub Unit	Sessions
I	**INTRODUCTION TO Mathematical functions** **Basic Concepts**: Variables, Sets, Functions, Equations, Identities, Systems of Equations, Application of Straight Line System, Slope of the Line, Homogeneous Function.	10
II	**Mathematical Techniques for Economic Analysis**: Role Of Mathematical Techniques In Economic Analysis, Theory of Numbers, Indices and Factorization.	10
III	**Matrix and Determinants**: Various types of Matrices, Determinants, Inverse of a Matrix, Crammer's Rule.	10
IV	Economic Analysis Tools: Elasticities; Inter- relationships among Total, Marginal and Average Cost and Revenues; Constrained Optimisation Problem; Integration of a Function, Consumer's and Producer's Surplus	10
V	**Concept of Linear Programming** — Graphic Method, Progression, Growth	08

	Rate, Equilibrium.	

SUGGESTED READINGS:

Text Books:

Sr. No	Author/s	Name of the Book	Publisher	Edition & Year of Publication
T-01	Alfa C. Chiang and Kevin Wainwright	Fundamental Methods of Mathematical Economics	McGraw Hill Education	4rth Indian Edition

Reference Books:

Sr. No	Author/s	Name of the Book	Publisher	Edition and Year of Publication
R-01	Agarwal, D.R. (2009)	Mathematics for Economics	Vrinda Publications, Delhi.	8th Edition
R-02	Livernois, John., Rees, Ray., & Hoy, Michael	Mathematics for Economics	PHI Learning.	6th Edition (2012)
R-03	Rosser, Mike	Basic Mathematics for Economists	Routledge	6th 2003
R-04	Bhardwaj,R.S	Mathematics for Economics and Business,	ExcelBooks	4rth 2006