PROGRAMME NAME: B. A. (Hons.) Business Economics	
COURSE NAME: Mathematics for Business Economics I	
SEMESTER DURATION: July-November	

WEEK	TOPIC(S)	TEACHING METHODOLOGY ADOPTED/CONTINUOUS INTERNAL EVALUATION
1-3	Unit 1: Introduction Algebra concepts, number systems, inequalities, mathematical logic, proof techniques; sets and set operations; functions and their properties.	Classroom Teaching and Practice Questions
4-6	Unit 2: Univariate Analysis Curves and graphs, elementary functions: linear, quadratic, polynomial, power, exponential, logarithmic sequences and series: convergence, algebraic properties and applications	Classroom Teaching and Practice Questions
7-8	Continuous functions: characterisations, properties with respect to various operations and applications Differentiable functions: characterisations, properties with respect to various operations and applications.	Classroom Teaching and Practice Questions Surprise Test

9-10	Second and higher order derivatives properties and applications Geometric properties of functions: convex functions, their characterisations and applications local and global optima: geometric and calculus-based characterisations, and applications.	Classroom Teaching and Practice Questions
11	Unit 3: Linear Algebra Linear Algebra: Vector spaces: algebraic and geometric properties, scalar products, norms, orthogonality, linear transformations: properties, matrix representations and elementary operations.	Classroom Teaching, Problem Solving and Practice Questions
12-13	Systems of linear equations: properties of their solution sets, determinant characterization, properties and applications. Eigenvalues and eigenvectors, diagonalization.	Classroom Teaching and Practice Questions Remedial Classes for slow students
14-15	Spectral Theorem. Unit 4: Integration Integrals indefinite and definite. Methods of integration and Economic applications	Classroom Teaching, Problem Solving and Practice Questions Remedial Classes
16	Revision and tests	