

NIRMA UNIVERSITY
Institute of Management
Integrated Bachelor of Business Administration-Master of Business
Administration Programme
Term - I

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Course Code	BBA1CCOQ01
Course Title	Mathematics-I

Course Learning Outcomes (CLO):

At the end of the course, students will be able to:

1. Identify the basic mathematical tools which are used in business.
2. Develop insights in mathematical concepts towards understanding business problems.
3. Analyze managerial situations using mathematical concept.

Syllabus

Teaching Hours

Unit I: Set Theory, Permutation and Combination <ul style="list-style-type: none"> • Basic Concepts sets, type of sets, Set Operations, Venn Diagram. • Cardinality of a set, concept of ordered pairs, Cartesian product of two sets. Applications of set theory. • Introduction to permutation and combination, fundamental principle of counting, simple properties and restricted combination. 	7
Unit II: Quadratic Equations and Functions <ul style="list-style-type: none"> • Quadratic equations, finding roots of quadratic equations. • Formation of quadratic equation when the roots are given. • Basic Concept of function, types of functions, graphical representation of functions. • Some special functions: logarithmic and exponential functions and their properties. • Functions used in economics and business. • Applications of functions -Break-even analysis 	8
Unit III: Limits and Continuity <ul style="list-style-type: none"> • Basic Concepts and Definitions. • Standard results on Limits and rules to evaluate limits. • Continuity of a function. 	7
Unit IV: Coordinate Geometry and Progression <ul style="list-style-type: none"> • Cartesian coordinate system, the distance formula. • Standard forms of equations of a straight line, slope of a straight line. • Perpendicular and parallel lines, general equation of straight line, Applications of straight lines. • Sequence and series, general terms of sequence • Arithmetic progression (AP), general term of AP, sum to first n- terms of an AP, Arithmetic Mean. 	8

<ul style="list-style-type: none"> • Geometric progression (GP), general term of GP, sum to first n- terms of a GP, Geometric Mean. • Application of AP and GP. 	
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Suggested Readings:

1. Kapoor, V.K., Business Mathematics, Sultan Chand & Sons.
2. Raghavachari, M., Mathematics for Management, latest edition, Tata McGraw Hill Publication.
3. Sancheti, D.C & Kapoor, V.K., Business Mathematics, Sultan Chand Publications.
4. Jacques, I., Mathematics for Economics and Business, Pearson Education.
5. Mariappan, P., Business Mathematics, Pearson.
6. Renshaw, G., Mathematics for Economics, Oxford University Press.
7. Quazi, Z., Khanna, V. K., and Bhambri, S. K., Business Mathematics, Vikas Publishing House.

w.e.f. Academic Year 2019-20 and onwards