



Bachelor of Business Administration (BBA-General)
Semester - II

Course Code	UM02 ID BBA01	Title of the Course	BUSINESS MATHEMATICS-II
Total Credits of the Course	04	Hours per Week	04

Course Objective	<p>1. To develop a deep understanding of mathematical concepts and techniques that are relevant to solving problems related to business and economics.</p> <p>2. To develop the ability to apply mathematical tools and techniques to analyze data, solve problems, and make informed decisions in a business context.</p> <p>3. To develop the ability to communicate mathematical ideas and solutions clearly and effectively to others.</p>
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Course Content		
Unit	Description	Weight (%)
1.	<p>Interpolation and Extrapolation Meaning of Interpolation and Extrapolation, Assumptions, Importance of Interpolation and Extrapolation, Operators Δ and E (without proof), Methods of Interpolation and Extrapolation: 1. Newton's Method 2. Binomial expansion method 3. Lagrange's method and examples on these methods.</p>	25 %
2.	<p>Assignment problems (AP) and Replacement Problems: Meaning of Assignment Problem, Mathematical form of Assignment problems, Hungarian method for solving Assignment problems in the cases of maximization and minimization problems, Meaning of Replacement problem, Examples of Replacement problems.</p>	25 %
3.	<p>Co-ordinate Geometry: Cartesian Co-ordinate System, Distance between two points (without proof), slope of line, slope of parallel and perpendicular lines, Intersect point of two lines, Equations of line (1) Two Point Form (2) Point and Slope form (3) Intercept and slope form (4) Two Intercept form and example on it.</p>	25 %
4.	<p>Derivatives and Applications of derivatives: Definition of derivative, Derivatives of explicit, composite functions, Derivatives of exponential and arithmetic functions, working rules of differentiation (without proof), Higher order derivatives, maxima and minima of a function in simple polynomial form.</p>	25 %





Teaching-Learning Methodology	Lecture, Assignment, Quiz, Seminars, Mooc videos, Content- Focused Methods and Interactive / Participative Methods.
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weight
1.	Internal Written (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes	
1	Students will be able to apply the principles of assignment problems to optimize resource allocation and minimize costs in a business setting.
2	Students will be able to apply the principles of replacement problems to make decisions about asset management and replacement in a business context.
3	Students will be able to apply the principles of the applications of derivatives to make informed decisions about maximizing profits, minimizing costs, and managing risk in a business context.
4	Students will be able to use interpolation and extrapolation to make predictions and analyze trends in business data.

Suggested References	
Sr. No.	References
1	Sancheti & Kapoor: Statistic: Theory, Methods and Applications, Sultan Chand & Sons, New-Delhi.
2	Kapoor, V. K.: Business Mathematics, Sultan Chand and Sons, New Delhi.
3	H. A. Taha, Operations Research Macmillan Publishing Co. Inc.
4	J. K. Sharma: O. R. Theory and Applications, Macmillan India Ltd.





5	A.J. Patel, H.S. Doshi: Operations Research, Himalaya Publishing House.
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On-line resources to be used if available as reference material

On-line Resources:

<https://atozmath.com/default.aspx>

<https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=ZLCHeZEhCZ8yCri36nSF3A==>

