



**SARDARPATELUNIVERSITY**  
**Vallabh Vidyanagar, Gujarat**  
**(Reaccredited with 'A' Grade by NAAC (CGPA3.11))**  
 Syllabus with effect from the Academic Year 2023-2024

**Bachelor of Business Administration**  
**BBA (ITM)-Semester-II**

Course Code	UM02IDBBI01	Title of the Course	Business Mathematics -II
Total Credits of the Course	04	Hours per Week	04

Course Objectives:	1. Review the key Mathematics concepts that students should be familiar with in order to solve quantitative problems. 2. To illustrate and to teach students the Mathematical functions and formulas that facilitates the application.
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Course Content		
Unit	Description	Weightage *(%)
1.	<b>Interpolation And Extrapolation:</b> <ul style="list-style-type: none"> <li>• Meaning of Interpolation And Extrapolation ,Assumptions, Importance and uses of Interpolation and Extrapolation</li> <li>• Operators , <math>\Delta</math> (Delta) , E and D (without proof)</li> <li>• Methods of Interpolation And Extrapolation:               <ol style="list-style-type: none"> <li>(1) Newton's method</li> <li>(2) Binomial expansion method</li> <li>(3) Lagrange's method simple examples on all three methods</li> </ol> </li> </ul>	25%
2.	<b>Assignment and Replacement theory :</b> <ul style="list-style-type: none"> <li>• Definition of Assignment and Replacement problems with examples</li> <li>• Methods of solving Assignment and Replacement theory with simple examples.</li> <li>• Hungarian Method examples (only balanced minimization problem)</li> </ul>	25%
3.	<b>Transportation Problem :</b> <ul style="list-style-type: none"> <li>• Solution of Transportation Problem by</li> <li>• N-W corner method,</li> <li>• Matrix minima method and</li> <li>• Vogle's Approximation method (including unbalanced problems)</li> </ul>	25%
4.	<b>Derivatives and application of Derivatives:</b> <ul style="list-style-type: none"> <li>• Rules of differentiation (without proof)</li> <li>• Simple examples of Derivative based on addition, subtraction, multiplication and division rules.</li> <li>• Second order Derivatives</li> <li>• Examples based on Maxima and minima of the function,( Equilibrium price, demand ,supply, ,revenue and cost function, theory only)</li> </ul>	25%
Teaching-Learning Methodology: (1) ICT Based Teaching Learning Approach (2) Blended Teaching Learning Approach for Calculation.		





Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written (AsperCBCSR.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Viva(MCQ), Assignments, Attendance (AsperCBCSR.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learner will be able to	
1.	Demonstrate the ability to use skills in Statistics and different practicing areas for formulating And tackling Statistics related problems and identifying and applying appropriate principles and methodologies to solve a wide range of problems associate with Statistics.
2.	Recognize the importance of statistical modeling and computing, and the role of approximation And mathematical approaches to analyze the real problems using various statistical tools.
3.	Plan and execute Statistical experiments or investigations, analyze and interpret data/information collected using appropriate methods, including the use of appropriate Statistical software including programming languages, and report accurately the findings of the experiment/investigations.

Suggested References:	
Sr. No.	References
1.	Business Mathematics .K . Kapoor: Sultan Chand and sons, New Delhi
2.	Business Mathematics ,A .G. Patel & G .C. Patel Atul Prakashan
3.	Sharma S.D Operation Research .KedarNath Ram Nath & Co. Meerut

**E References**

1.	<a href="https://www.pdfdrive.com/lectures-in-logic-and-set-theory-volume-2-set-theory-e156797838.html">https://www.pdfdrive.com/lectures-in-logic-and-set-theory-volume-2-set-theory-e156797838.html</a>
2.	<a href="https://www.pdfdrive.com/set-theory-and-logic-e16230754.html">https://www.pdfdrive.com/set-theory-and-logic-e16230754.html</a>
3.	<a href="http://rccmindore.com/wp-content/uploads/2015/06/Operations-Research.pdf">http://rccmindore.com/wp-content/uploads/2015/06/Operations-Research.pdf</a>
4.	<a href="https://theintactone.com/2019/03/04/qtm-u2-topic-1-mathematical-formulations-of-1p-models-for-product-mix-problems/">https://theintactone.com/2019/03/04/qtm-u2-topic-1-mathematical-formulations-of-1p-models-for-product-mix-problems/</a>

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