Bachelor of Commerce (B.Com.)
Semester - II

Course Code	UB02 MDCOM 01	**Title of the Course**	**BUSINESS MATHEMATICS & STATISTICS-II**
Total Credits of the Course	**04**	**Hours per Week**	**04**

Course Objectives	1.To Develop proficiency in the application to solve business problems by various Mathematical and Statistical Techniques.
	2.To understand the important role of Mathematical and Statistical techniques plays in all facets of the business world.
	3. To understand the basic concepts of Mathematics and Statistics.

Course Content		
Unit	**Description**	**Weightage (%)**
1.	**Linear Programming Problem and Transportation Problem:** LPP: Meaning, nature, limitations of LP, uses of LP, Definitions: Solution, constrains, BFS, FS, objective functions solution of LPP by Graphical Method. Transportation Problem - N-W corner rule, matrix Minima Method, Vogel's Approximation Method	**25 %**
2.	**Assignment and Replacement Problems:** Definition of balanced Assignment Problem (A. P.), its mathematical form, Application of Hungarian method for solving A. P. in the cases of maximization and minimization problem, Meaning of Replacement problem (R. P.), Simple examples of replacement problem.	**25 %**
3.	**Co-ordinate Geometry** Cartesian Co-ordinate System, Distance between two points, slope of line, slopes of Parallel and perpendicular lines, Equations of a line for: - Two Point Form - Point Slope form - Intercept form - Two Intercept Form.	**25 %**
4.	**Derivatives and Applications of derivatives** Derivatives of explicit, Composite and implicit functions, Derivatives of exponential and arithmetic functions, Rules of differentiation (without proof), Higher order derivatives, maxima and minima of a function in simple polynomial form.	**25 %**

Teaching-Learning Methodology	Lecture, Assignment, Quiz, Seminars, Mooc videos, Content- Focused Methods and Interactive / Participative Methods.

Evaluation Pattern		
Sr. No.	**Details of the Evaluation**	**Weightage**
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.	Lead to the students to analyze any real life system with limited constrains and depict it in model form.
2.	To have a proper understanding of Statistical and Mathematical applications in Economics, Finance, Commerce and Management Integrate international business concepts with functioning of global trade.
3.	Convert the problem into a Mathematical model and solve it manually.

Suggested References	
Sr. No.	**References**
1	Sancheti & Kapoor: Statistic: Theory, Methods and Applications, Sultan Chand & Sons, NewDelhi.
2	Kapoor, V. K.: Business Mathematics, Sultan Chand and Sons, New Delhi.
3	Soni, R. S.: Business Mathematics, Pitamber Publishing House.
4	H. A. Taha, Operations Research Macmillan Publishing Co. Inc.
5	J. K. Sharma: O. R. Theory and Applications, Macmillan India Ltd.
6	A.J. Patel, H.S. Doshi: Operations Research, Himalaya Publishing House.

On-line resources to be used if available as reference material
On-line Resources
1. https://youtu.be/86NwKBcOlow
2. https://youtu.be/Ow3XWYnPgSM
3. https://www.youtube.com/live/8npk04bd2XA?feature=share

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