SARDAR PATEL UNIVERSITY
Vallabh Vidyanagar, Gujarat
(Reaccredited with 'A' Grade by NAAC (CGPA 3.25)
Syllabus with effect from the Academic Year 2021-2022

(B.Com) (Business Studies) (Semester-II)

Course Code	UB02CCOM73	Title of the Course	Business Mathematics & Statistics - II
Total Credits of the Course	03	Hours per Week	03

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** 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 (Including unbalanced problem)	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 when the units are deteriorate depending on time and money value remains same.	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 economic theory (demand, supply, consumption, revenue and cost function), Equilibrium price.	25%

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

	Evaluation Pattern	
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written / Practical Examination (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Practical, Viva-voce, Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

	Course Outcomes: Having completed this course, the learner will be able to
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, New Delhi
2.	Kapoor, V. K.: Business Mathematics, Sultan Chand and Sons, New Delhi
3	Soni, R. S.: Business Mathematics, Pitamber Publishing Ho
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:

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