

# C P PATEL AND F H SHAH COMMERCE (AUTONOMOUS) COLLEGE, ANAND

(Managed by SARDAR PATEL EDUCATION TRUST, ANAND)

AFFILIATED TO SARDAR PATEL UNIVERSITY, V V NAGAR

An ISO 9001 2015 Certified / An ISO 14001-2015 Certified / An ISO 21001-2018 Certified  
GUJARAT INSTITUTIONAL RATING FRAMEWORK (4 STAR)

AAA Reaccredited CGPA 3.56 – GRADE **A<sup>+</sup>** KCG-Dept of Edu. Got of Gujarat-April 2017

NAAC Reaccredited - CGPA 3.30 - GRADE **'A<sup>+</sup>'** UGC – MHRD, Govt of India – June 2022

Syllabus as per NEP 2020 with effect from the Academic Year 2023-2024

## Bachelor of Commerce (B Com)

### Semester - II

Course Code	UB2MICOM02	Title of the Course	Business Mathematics and Statistics-II
Total Credits of the Course	04	Hours per Week	04

<b>Course Objectives</b>	1. To enable students to understand and apply coordinate geometry principles in solving business-related problems.
	2. To introduce the fundamental Mathematical concepts and techniques essential for financial analysis and decision-making in business settings.
	3. To familiarize students with the concept of correlation and its application in determining the strength and direction of relationships between variables in business scenarios.
	4. To equip students with the knowledge and skills required to perform linear regression analysis for predictive modelling and decision-making in business contexts.

Course Content		
Unit	Description	Weightage (%)
1.	<b>Plane Co-ordinate Geometry:</b> 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 slop form (4) Two Intercept form and example on it, and Application of Coordinate Geometry in commerce.	25 %
2.	<b>Mathematics in Finance:</b> Compound Interest, Nominal and Effective Rates of Interest, Continuous compounding, Annuity (only for a fixed period of time), Present and Future value of Annuity, Sinking funds (with equal payments and equal time intervals)	25 %

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3.	<b>Linear Correlation:</b> Introduction and meaning, interpretation and types of correlation, Methods to study Correlation: Scatter Diagram, Karl Pearson's Product Moment Methods, Spearman's Rank correlation, Properties of Correlation, Probable Error, Coefficient of determination and Application of correlation in commerce and Management.	25%
4.	<b>Linear Regression:</b> Introduction and meaning of Regression, Meaning of Regression Lines, Regression Coefficients, properties of regression co-efficient, Coefficient of determination, Application of regression in Commerce and Management	25 %

<b>Teaching-Learning Methodology</b>	Lectures, Assignment, Quiz, Seminars, Content- Focused Methods, Interactive / Participative Methods and online lectures.
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Written Examination	25%
2.	Internal Continuous Internal Assessment in the form of Quizzes, Seminars, Assignments, Viva voce, Attendance	25%
3.	Semester End Examinations	50%

Course Outcomes	
1.	Student will be able to proficient in using coordinate systems to analyze and present business-related information effectively
2.	Students will understand mathematical principles which are applied in financial calculations; including interest, present value and future value.
3.	Students will capable to calculate and interpret correlation coefficients for sets of business-related variables.

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4.	Students will be able to proficient in conducting linear regression analysis to model and predict outcomes based on business data.
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## Suggested References

Sr. No.	References
1	Sancheti & Kapoor (2010): Statistic: Theory, Methods and Applications, 7 <sup>th</sup> Edition 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 House.
4	Trivedi and Trivedi: Business Mathematics, Pearson India Limited. New Delhi.
5	Dr P C Tusian: Business Statistics, S Chand, New Delhi.
6	H R Vyas (2017): Business Statistic, B S Shah Publication, Ahmedabad
7	Levin and Rubin (2011): Statistics For Management, 7 <sup>th</sup> Edition, Pearson India, New Delhi.
8	Ken Black (2023): Business Statistics: For Contemporary Decision Making, 10 <sup>th</sup> Edition, Jhon Wiley & Sons

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==>

