

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⁺** KCG-Dept of Edu. Got of Gujarat-April 2017

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

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

Bachelor of Commerce (BCOM)

Semester - I

Course Code	UB1MDCOM03	Title of the Course	Mathematics For Commerce-I
Total Credits of the Course	04	Hours per Week	04

Course Objectives	1. To develop mathematical skills and their application in various business contexts
	2. To enhance their ability to analyze and interpret financial data.
	3. To make informed business decisions and effectively communicate mathematical concepts in a business environment.
	4. To develop the ability to communicate mathematical ideas and solutions clearly and effectively to others.

Course Content

Unit	Description	Weightage (%)
1.	Set Theory: Set Theory: Sets, Subsets, Equality of two sets, null set, universal set, power set, complements of a set, union and intersection of sets, difference of two sets. Application of set theory in commerce Venn Diagram (Concept only), Laws of algebra of sets, De Morgan laws and Cartesian Product of two sets.	25 %
2.	Ratio, Proportion, Percentage, Profit, Loss and Discount Meaning of Ratio and Inverse Ratio, Properties of Ratios, Mathematical Uses of Ratio, Meaning and Properties of Proportion and Examples of Proportion Definition and Utility of Percentages, Concept of Percentages Change, Examples related to Percentages, Definition of Profit, Loss and Discount. Application of them in commerce.	25 %

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3.	Mathematics in Finance: Compound Interest, Nominal and Effective Rates of Interest, Continuous compounding, Concept of Present value and Amount of a Sum, Annuity (only for a fixed period of time), Present and Future value of Annuity, Sinking funds (with equal payments and equal time intervals)	25%
4.	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 slop form (4) Two Intercept form and example on it, Applications of coordinate geometry in commerce.	25 %

Teaching-Learning Methodology	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.	Internal Written Examination	30%
2.	Internal Continuous Assessment in the form of Quizzes, Seminars, Assignments, Viva voce, Attendance	20%
3.	Semester end Examination	50%

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Course Outcomes	
1.	Students will be able to understand and apply the principles of set theory in business related problems.
2.	Students would be able to demonstrate a solid understanding of commerce and finance, such as calculating prices, negotiating deals, evaluating profitability, and making informed financial decisions. These concepts would provide the foundation for assessing the financial health of a business and optimizing its performance.
3.	Students will be able to apply mathematical concepts and techniques in the field of finance, such as understanding interest rates and calculating present and future values of annuities.
4.	Students will be able to use coordinate geometry to analyze geographic market segments and identify areas for potential business expansion.
5.	Students will be able to enhance their thinking and analytical abilities in business problem-solving.

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 House.
4	Trivedi and Trivedi: Business Mathematics, Pearson India Limited. New Delhi.
5	Dr. K R Kachot: Business Mathematics, Mahajan Publication House.
6	A. Lenin Jothi: Financial Mathematics
7	S C Gupta: Fundamentals of Statistics, Sixth Edition
8	Richard I Levin, David s Rubin: Statistics For Management, Seventh Edition

On-line resources to be used if available as reference material

On-line Resources:

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

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