



Janardan Bhagat Shikshan Prasarak Sanstha's
CHANGU KANA THAKUR
ARTS, COMMERCE & SCIENCE COLLEGE,
NEW PANVEL (AUTONOMOUS)

Re-accredited 'A+' Grade by NAAC
'College with Potential for Excellence' Status Awarded by UGC
'Best College Award' by University of Mumbai

Program: B.Com.

Revised Syllabus of F.Y.B.Com. : Bridge Course in Mathematical
& Statistical Techniques
Choice Based Credit & Grading System
w.e.f. Academic Year 2019-20

Sr. No.	Heading	Particulars
1	Title of Course	Bridge Course in Mathematical & Statistical Techniques
2	Eligibility for Admission	12 th Science & Commerce of all recognised Board
3	Passing marks	40%
4	Ordinances/Regulations (if any)	
5	No. of Semesters	One
6	Level	U.G.
7	Pattern	Semester
8	Status	Revised
9	To be implemented from Academic year	2019-2020

Preamble:

Mathematical thinking is important for all members of a modern society as a habit of mind for its use in the workplace, business and finance and for personal decision making. Mathematics is fundamental to national prosperity in providing tools for understanding Science, Engineering, Technology and Economics. It is essential in public decision making and for participation in the knowledge economy. Mathematics is a creative discipline.

Objectives:

1. To introduce the basic concepts of Mathematics and Statistics.
2. To increase the learners appreciation of the basic role played by Mathematics in modern technology.
3. To prepare learners to face challenges of privatization and globalization by providing basic knowledge and skill of Mathematics and Statistics.
4. To bridge the gap between commerce and higher Mathematics.

Learning Outcomes:

This course will help students to learn about the basic concept relating Mathematics and Statistics , Calculus, Measures of central tendencies, Dispersion, sources of data, classification of data, Probability, etc. It will further help to apply the statistical tools and techniques for decision making and for research studies.

Scheme of Examination

The learner's Performance shall be assessed by Course End Examinations with 50 marks.

Course End Examination: 50 Marks

- Duration: The examination shall be of 2 hour's duration.

Passing Standard

The learners shall have to score at least 40% of the total marks to pass in the course.

Syllabus for Bridge Course in Mathematical & Statistical Techniques

Bridge Course in Mathematical & Statistical Techniques

Unit-I	Introduction to Mathematics and Statistics, Mathematics and you, Ratio and proportion, Percentage, Profit and Loss, Partnership and Discount.
Unit -II	Arithmetic and Geometric Progression, Functions: constant function, linear function, demand and supply function, total revenue function, total cost and profit function and their applications. Quadratic functions and equations
Unit- III	Introduction to Calculus: Rate of Change and Limits, Derivatives as a Rate of Change, Derivatives of function: Constant function, x^n , e^x , a^x , $\log x$, Differentiation rules: Scalar multiplication, addition, subtraction, product and quotient, simple examples.
Unit -IV	Preliminary: Descriptive Statistics: Introduction, Frequency Tables, Histograms, Measures of Central Tendency: Mean and Median, Measures of Dispersion: Variance and Standard deviation.
Unit-V	Basic Probability: Introduction, Sample space and events, Axioms of Probability and simple examples.

Reference Books

Mathematical and Statistical Techniques

- *Mathematics for Economics and Finance Methods and Modelling* by Martin Anthony and Norman Biggs, Cambridge University Press, Cambridge low-priced edition, 2000, Chapters 1, 2, 4, 6 to 9 & 10.
- *Applied Calculus: By Stephen Waner and Steven Constenoble*, Brooks/Cole Thomson Learning, second edition, Chapter 1 to 5.
- *Mathematics for Business Economics: By J. D. Gupta, P. K. Gupta and Man Mohan*, Tata Mc- Graw Hill Publishing Co. Ltd., 1987, Chapters 9 to 11 & 16.
- *STATISTICS by Schaum Series.*
- *Operations Research by Gupta and Kapoor*
- *Fundamentals of Statistics - D. N. Elhance.*
- *Statistical Methods - S.G. Gupta (S. Chand & Co.*
- *Business Mathematics & Statistics: B Aggarwal, Ane Book Pvt. Limited*
- *Business Mathematics: A P Verma, Asian Books Pvt. :Limited.*
- SCHAUM'S outline of Theory and Problems of College Mathematics , 3rd edition, by Philip. A Schmidt and Frank Ayres, Tata McGraw Hill Publication.
- SCHAUM'S outline of Theory and Problems of Introduction to Probability and Statistics by Seymour Lipschutz and John J. Schiller: Tata MaGraw Hill Publishing Ltd.