ST. XAVIER'S COLLEGE
(AUTONOMOUS)

Re-accredited with 'A+' by NAAC (4th Cycle) | Affiliated to Gujarat University

DEPARTMENT OF COMMERCE
MULTIDISCIPLINARY COURSE SYLLABUS

Multidisciplinary Course: Fundamental Statistics - II

Course Title & Code	Credit Distribution of The Course			Eligibility Criteria	Prerequisite(s) of the Course (if any)
	Lecture	Tutorial	Practical / Practice		
Fundamental Statistics - II	4	0	0	10 + 2 from a recognized board in any stream	Nil

I. Learning Objectives

This course will impart the students with knowledge in basic statistical tools.

II. Course Outcomes

At the end of the course, a student will be able to:

CO-1. Use various methods of interpolation and extrapolation.

CO-2. Understand time series data, its components and also forecast variations for future time periods.

CO-3. Understand the notation and formulae concerning the use and construction of index numbers.

CO-4. Demonstrate the ability to use the methods of statistical process control.

III. Course Content

UNIT - 1: Interpolation and Extrapolation (15 lectures)

Introduction, Definitions, Importance, Limitations and Assumptions of Interpolation and Extrapolation; Function, Argument and Entry; Methods of Interpolation; Binomial Expansion Model; Newton's Forward Interpolation Formula; Newton's Backward Interpolation Formula; Lagrange's Interpolation Formula; Extrapolation.

UNIT - 2: Index Numbers (15 lectures)

Meaning; Notations used in Index Numbers; Characteristics and Uses of Index Numbers; Types of Index Numbers; Problems in construction of index numbers; Methods of constructing Index Numbers; Fixed-base and chain-base Indices; Deflating, Base shifting and Splicing of Index Numbers; Limitations of Index Numbers

UNIT - 3: Analysis of Time Series (15 lectures)

Meaning of Time series; Analysis of Time series; Components of Time series; Model of Time series; Methods of measuring Secular Trend (T); Methods of determination of Seasonal Fluctuations (S), Measurement of Cyclical Variations (C); Measurement of Irregular variations.

UNIT - 4: Statistical Quality Control (SQC) (15 lectures)

Introduction; Causes of Variation in Quality; Objectives of SQC; Advantages of SQC; Techniques of SQC.

IV. Textbook:

A Textbook of Business Statistics by Dr. Padmalochan Hazarika, S. Chand publishing

V. Suggestive Readings

1. N G Das & J K Das, Business Mathematics and Statistics, Tata McGrow Hill Pvt. Ltd.
2. J K Sharma, Business Statistics, Vikas Publishing House.
3. Trivedi and Trivedi: Business Mathematics, Pearson India Ltd. New Delhi.