U.G. B.A/B.COM (HONS.) – ID/ MD
SEMESTER – III
BASICS OF STATISTICS
COURSE CODE: MDC STA 234
CREDIT MARK DISTRIBUTION – 04
AS PER NEP 2020   (To be effective from June 2024)

Lecture 04 Hours
Tutorial – 00
Practicum – 00

COURSE OBJECTIVES

The course objectives for "Basics of Statistics" are tailored to equip students with the necessary statistical tools and basics of methods of probability. This course aims to provide a foundation in statistical methods specifically tailored to address Vital Statistics, Data Analysis and methods to find out probability. The course objectives for "Basics of Statistics" aim to empower students with the ability to understand, analyze, and interpret data critically. By the end of the course, students should be equipped to conduct basic statistical analyses and knowledge of how to determine probability of events. This knowledge is necessary for the students who are opting statistics subject and for the professional and advanced studies this course will be very advantageous.

PRE – REQUISITE

The prerequisites for a course in "Basics of Statistics" can vary depending on the institution and the specific level of the course. Generally, the course is designed to be accessible to students of all the discipline those who may not have extensive prior experience in statistics. However, some basic knowledge and skills are often helpful for students to grasp the concepts effectively. Some Statistics courses are designed to be introductory and assume minimal prior statistical knowledge.

COURSE OUTCOMES

The course outcomes for "Basics of Statistics" outline the specific knowledge, skills, and competencies that students are expected to acquire and demonstrate upon completing the course. These outcomes reflect the core objectives of the course and provide a clear description of what students should achieve in terms of statistical knowledge and practical applications. The course outcomes for "Basics of Statistics" aim to to give basic knowledge of tool requires for analyzing the probability distributions. Upon completion of the course, students should be prepared to apply statistical reasoning and methodologies to address population study related

question, to make them aware of importance of probability mass functions and to make students familiar with various types of distribution functions and their applications.

UNIT	CONTENT	WEIGHTAGE

1	**DEMOGRAPHIC METHODS**
	➢ Meaning of Demographic Methods
	➢ Use of Demographic Methods
	➢ Method of Collecting Demographic Statistics:
	➢ Death rates
	    Crude death rate (CDR) and Standardized Death Rate (SDR)
	➢ Examples to find CDR., SDR. and to compare the healthiness of regions.
	➢ Meaning of Infant Mortality Rate (IMR)
	➢ Crude birth rate (CBR)
	➢ Meaning of Fertility Rates Like
	    General Fertility Rate (GFR)
	    Specific Fertility Rate (SFR)
	    Total Fertility Rate (TFR)
	➢ Simple Examples related to these formulae
		25%

2	**SKEWNESS & KURTOSIS**
	➢ Meaning of Skewness
	➢ Types of Skewness
	➢ Methods for finding Skewness
	    Karl – Pearson's Method
	    Bowley's Method
	➢ Meaning of Kurtosis
	➢ Brief Explanation of
	    Leptokurtic Curve
	    Mesokurtic Curve
	    Platykurtic Curve
	(Note: Only theory of Kurtosis without any formula such as β_1, β_2, γ_1, γ_2)
		25%

3	**BINOMIAL DISTRIBUTION** ➢ Introduction to Binomial Distribution ➢ Properties and Uses of Binomial Distribution ➢ Examples Related to Binomial Distribution	25%
4	**POISSON DISTRIBUTION** ➢ Introduction to Poisson Distribution ➢ Properties and Uses of Poisson Distribution ➢ Examples Related to Poisson Distribution	25%

Pedagogical Tools:

- Classroom Lectures and discussion
- Problem Solving
- Tutorial
- Group Discussion
- Seminar
- Assignments

MODE OF EVALUATION

Evaluation will be divided in two parts.

- **External:** Semester end Examination will be conducted by the Gujarat University of 50 Marks

- **Internal:** Internal Evaluation of 50 marks will be decided by the colleges / Institutes/ University departments as per the instruction given by the University time to time.

FBLD (Flip Blended Learning Design Template)

- Any One Unit from the above syllabus can be discussed by the faculty through online mode.

- Online mode can be SWAYAM MOOC Course or any other suggested by the UGC or Gujarat University.

REFERENCE BOOKS:

1. Sancheti & Kapoor: Business Statistics. Sultan Chand & Sons, New Delhi

2. Sancheti & Kapoor: Business Mathematics, Sultan Chand Sons, New Delhi..

3. S. C. Gupta, V. K. Kapoor, Fundamentals of Applied Statistics, Sultan Chand & sons, New Delhi.

4. S.C. Gupta: "Fundamentals of Mathematica Statistics" S. Chand, New Delhi.

5. "Statistics for Social Sciences" by R. Agarwal (Publisher: S. Chand Publishing)