PARVATHANENI BRAHMAYYA
SIDDHARTHA COLLEGE OF ARTS & SCIENCE
Autonomous
Siddhartha Nagar, Vijayawada–520010
Re-accredited at 'A+' by the NAAC

23STMDL101 : Basic Statistics **Offered to: All UG Programs**
Course Type: Multi-Disciplinary (Core -TH) **Year of Introduction: 2023-24**

Year of offering: 2023 – 2024 **Semester**: II 30 Hrs **Credits: 2**

Course Prerequisites: Basic knowledge in Mathematics.

Course Description:
This course helps the students to familiarize with the ways in which we talk about descriptive statistics.

Course Objectives:

1) To compute various measures of central tendency, dispersion and skewness.
2) To get the knowledge regarding qualitative factors

Course Outcomes:		
Course Outcome	Upon successful completion of this course, students will be able to	**P.O Mapping**
CO 1	Understand the statistical concepts like Data Collection and Classification and drawing of different types of charts and graphs	PO3
CO 2	Evaluation of summary measures such as measures of central tendency	PO3
CO3	Evaluation of summary measures such as measures of dispersion tendency	PO3
CO4	Explain the nature of the frequency distribution	PO3
CO5	Evaluate the relative measures of dispersion	PO3

CO-PO MATRIX							
COURSE CODE	**CO-PO**	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**
23STMDL101	**CO1**			**3**			
	CO2			**3**			
	CO3			**3**			
	CO4			**3**			
	CO5			**3**			

Syllabus

Unit	Learning Units	Lecture Hours
I	Meaning, scope and limitations of Statistics **Collection of data:** Primary and Secondary, Classification and Tabulation, Construction of frequency distribution. **Graphical Representation:** Histogram, Bar, Pie and Frequency polygon.	**10**
II	**Measures of Central Tendency:** Features of good average, Arithmetic Mean, Geometric mean , Harmonic Mean Median, Mode. Empirical relationship between Mean Median and Mode ; and AM, GM and HM. Simple Problems	**10**
III	**Measures of Dispersion:** Range, Quartile Deviation (QD), Mean Deviation(MD), Variance, Standard Deviation(SD), coefficient of variation(CV), Establish the relationship between QD, MD and SD. and Measures of Skewness based on central values and quartiles.	**10**

No derivations and proofs of statistical techniques

Text Book:

1. **Fundamentals of Statistics,** Himalaya Publishing House (1 May 2018), 978-9350517697

Reference Books

1. Statistics (Theory, Methods, Application) D C Sancheti, V Kapoor, Sultan Chand and Sons, New Delhi
2. Statistical Methods, S.P. Gupta, Sultan Chand and Sons, New Delhi
3. Statistics (Theory and Practice) B.N Gupta, Sahitya Bhavan, Agra

***

PARVATHANENI BRAHMAYYA
SIDDHARTHA COLLEGE OF ARTS & SCIENCE
Autonomous
Siddhartha Nagar, Vijayawada–520010
Re-accredited at 'A+' by the NAAC

23STMDL101: Basic Statistics

Max. Time: 2 hours **Maximum Marks: 35**

Section – A

Answer any THREE from the following **3 x 5M = 15Marks**

1. Explain the limitations of statistics (L-2, CO-1)
2. Explain the different parts of table (L-2, CO-1)
3. Explain the features of good average (L-2, CO-2)
4. Explain briefly about skewness (L-2, CO-4)
5. Explain the coefficient of Variation (L-2, CO-5)

Section – B

Answer any TWO from the following **2 x 10M = 20Marks**

6. From the following frequency distribution determine the standard deviation(L-2, CO-3)

Classes	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
frequency	3	8	12	15	22	14	8	6	2

7. From the following frequency distribution determine mean and median (L-2, CO-2)

Classes	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50
frequency	4	11	18	22	32	21	15	9	4

8. Draw Histogram and determine the mode from the following frequency distribution(L-2, CO-1)

Classes	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
frequency	13	20	28	38	55	34	22	10	5

***