



**VIKRAMA SIMHAPURI UNIVERSITY ::  
NELLORE**

**Common Framework of CBCS for Colleges in Andhra Pradesh  
(A.P. State of Council of Higher Education)**

*SYLLABUS OF*  
**ELEMENTARY STATISTICS  
SEMESTER-II**

**AS PART OF LIFE SKILLS COURSES  
UNDER CBCS/ SEMESTER FRAMEWORK**

**( with effect from 2020-21)**

**PROGRAMME: FOUR-YEAR UG PROGRAMME**

B.A,B.Com, B.Sc, B.C.A and B.B.A Programmes

**CBCS/SEMESTER SYSTEM**

*(with effect from 2020-21)*

**Syllabus of**

**ELEMENTARY STATISTICS**

**(LIFE SKILL COURSE)**

**SEMESTER-II**

**Objective:** To provide basic understating of general statistical tools and their elementary applications and to create awareness on Indian Statistical System.

**Learning outcomes**

**Unit-I:** To understand the concept of Statistics and its merits and demerits. Distinguishing primary and secondary data. Classification, Tabulation and Pictorial representation of data.

**Unit - II:** To understand the basic nature of data and how a single value describes the entire data set.

**Unit - III:** To understand the spread of the data and to draw conclusions from the comparison of averages, Measuring the degree of departure of a distribution from symmetry and reveals the direction of scattered ness of the items.

**Unit I**

**Statistics:** Meaning, scope and limitations of Statistics

**Collection of data:** Primary and Secondary data, Classification and Tabulation, Construction of frequency distribution.

**Graphical Representation:** Histogram, Bar, Pie and Frequency polygon.

**Unit II**

**Measures of Central Tendency:** Features of good average, Arithmetic Mean, Median, Mode. Merits and Demerits of Mean, Median and Mode.

**Unit III**

**Measures of Dispersion:** Range, Quartile Deviation (QD), Mean Deviation (MD) Standard Deviation (SD), Variance

Skewness: Karl Pearsons', Bowle's Coefficients of Skewness

### **Books for Study:**

1. Statistics (Theory, Methods, Application) D C Sancheti, V K 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

### **Co-curricular activities:**

*Objective is to apply the theoretical concept to real life data which enhances the learning and interpretation ability to the current environment.*

#### CoCA I:

- (i) Collect primary or secondary data and establish frequency distribution.
- (ii) Suitable pictorial/ Graphical representation to the established frequency distribution

#### CoCA II:

- (i) Select the data and then calculate AM, Median and Mode and interpret the result.
- (ii) Calculate the skewness based on central values and interpret the degree of departure of a distribution from symmetry and the direction of scatterdness of the items.

#### CoCA III:

- (i) Calculate the dispersion values of a data for a single or double data sets and to draw conclusions from the comparison of averages.
- (ii) Select the bivariate data (for example, select marks of any two subjects of your course) and calculate the degree of association and establish the linear relationship and find the forecasting value.

#### CoCA IV:

If there is an internet facility at your college/home, go through the Ministry of Statistics and Program Implementation site [www.mospi.gov.in](http://www.mospi.gov.in) to know about the Indian Statistical System and <https://desap.cgg.gov.in> or [www.apdes.in](http://www.apdes.in) to know about the Andhra Pradesh Directorate of Economics and Statistics (APDES) and its activities.

**\* NOTE : Preferred teaching Department is Mathematics/Statistics/Economics/Commerce**

**ELEMENTARY STATISTICS**  
**(LIFE SKILL COURSE W.E.F 2020-21 ADMITTED BATCH)**  
**SEMESTER-II**

**BLUE PRINT OF QUESTION PAPER**  
**(INSTRUCTIONS TO PAPER SETTER)**  
**(Statistical tables and Electronic Calculators are allowed)**

<b>UNIT</b>	<b>TOPICS</b>	<b>10 MARKS Questions</b>
<b>UNIT-I</b>	<b>Introduction</b>	<b>1 (Theory)</b>
	<b>Collection of data</b>	<b>1 (Theory)</b>
	<b>Graphical Representation</b>	<b>1 (Problem)</b>
<b>UNIT-II</b>	<b>Measures of central tendency</b>	<b>3 (Problems)</b>
<b>UNIT-III</b>	<b>Measures of dispersion</b>	<b>3 (Problems)</b>
	<b>Skewness</b>	<b>1 (Problem)</b>

**ELEMENTARY STATISTICS**  
**(LIFE SKILL COURSE W.E.F 2020-21 ADMITTED BATCH)**  
**SEMESTER-II**  
**STRUCTURE OF QUESTION PAPER**

*Time:2 Hours*

*Max. Marks : 50*

*Answer any FIVE Questions :-*

*5X10=50M*

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

**Instruction to Paper Setter :**

1. QUESTIONS SHOULD BE GIVEN ACCORDING TO THE BLUEPRINT ONLY.
2. STATISTICAL TABLES AND ELECTRONIC CALCULATORS ARE ALLOWED

**ELEMENTARY STATISTICS**  
**(LIFE SKILL COURSE W.E.F 2020-21 ADMITTED BATCH)**  
**SEMESTER-II**  
**MODEL QUESTION PAPER**

(Statistical tables and Electronic Calculators are allowed)

*Time:2 hrs*

*Max.marks:50*

**Answer any FIVE of the following questions(Mark:5 x 10 marks =50 Marks)**

1. Define Statistics.Explain limitations of statistics
2. Write Differences between Primary data and Secondary data
3. Prepare pie chart for expenditure in book publishing for the following data

Items of expenditure	Family A	Family B
Food	12000	15000
Clothing	5000	8000
House rent	15000	12000
Education	18000	5000
Miscellaneous	10000	10000

4. Compute mean from the following frequency distribution.

$x$	1	2	3	4	5	6	7
$y$	5	9	12	17	14	10	6

5. Find the median of the following data

Marks	0-10	10-20	20-30	30-40	40-50
No. of students	4	15	24	16	13

6. Find the mode of the following data

<b>Marks</b>	0-10	10-20	20-30	30-40	40-50
<b>No. of students</b>	3	15	7	10	12

7. Calculate mean deviation from the following data

$x$	5	10	15	20	25	30
$f$	3	4	8	12	7	2

8. Compute Quartile deviation from the following data

<b>Marks</b>	10	20	30	40	50	60
<b>No. of Students</b>	4	7	15	8	7	2

9. Compute Standard deviation to the following data

<b>Marks</b>	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
<b>No. of Students</b>	12	18	35	42	50	45	20	8

10. From the following data find out Karl Pearson's coefficient of skewness

<b>Variable</b>	10	11	12	13	14	15
<b>Frequency</b>	2	4	10	8	5	1