

SEMESTER-VII

BSc-PE-DSE-6(4)-502: APPLIED STATISTICS IN SPORTS

| Course title& Code | Credits | Credit distribution of the course | | | Eligibility criteria | Pre-requisite of the course (if any) |
|--|----------|-----------------------------------|----------|---------------------|---------------------------|--------------------------------------|
| | | Lecture | Tutorial | Practical/ Practice | | |
| BSc-PE-DSE-6(4)-502: APPLIED STATISTICS IN SPORTS | 4 | 3 | 1 | 0 | Class XII pass | Nil |

Learning Objective: The student will gain knowledge about Research Methods of sampling, writing of Research Reports and analysis of the data through statistical techniques.

Learning Outcome:

After completing the course, the students will be able to:

1. learn the Introduction Meaning and Definition of Statistics.
2. Understand function, need, and importance of Statistics. Types of Statistics, Meaning of the terms, Population, Sample, Data, types of data. Variables Discrete, Continuous. Parametric and non-parametric statistics.
3. Develop an understanding of Data Classification, Tabulation.
4. Understand Measures Central Tendencies, construct frequency tables Calculate central tendencies (Mean, median and mode)
5. Understand Measures of dispersion
6. Calculate Range, Quartile Deviation, Mean Deviation, Standard Deviation and Probable Error.
7. Calculate scoring scales
8. Learn about Probability Distributions and Graphs Normal Curve.
9. Understand probability, Principles of normal curve and Divergence from normality.
10. Construct Graphic Statistics (Line diagram, Bar diagram, Histogram, Frequency Polygon).

THEORY SYLLABUS (45 HOURS)

Unit I (12 Hours)

Introduction Meaning and Definition of Statistics. Function, need and importance of Statistics. Types of Statistics. Meaning of the terms, Population, Sample, Data, types of data. Variables; Discrete, Continuous. Parametric and non-parametric statistics.

Unit II (13 Hours)

Data Classification, Tabulation, and Measures of Central Tendency Meaning uses and construction of frequency table. Meaning, Purpose, Calculation, and Advantages of Measures of central tendency Mean, median, and mode.

Unit III (10 Hours)

Measures of Dispersions and Scales Meaning, Purpose, Calculation, and advances of Range, Quartile, Deviation, Mean Deviation, Standard Deviation, and Probable Error.

Meaning, Purpose, Calculation, and advantages of scoring scales

Unit IV (10 Hours)

Probability Distributions and Graphs Normal Curve. Meaning of probability- Principles of normal curve Properties of the normal curve. Divergence from normality Skewness- and Kurtosis. Graphical Representation; -in-. Statistics: Line diagram, Bar diagram, Histogram, Frequency Polygon.

SUGGESTED READING-

1. Sivaramakrishnan.S.(2006)StatisticsforPhysicalEducation,Delhi;FriendsPublication
2. Dhinu, M. R. (2018). Applied Statistics in Physical Education and Sports. Friends Publications (India).
3. Shaw, D. (2018). Fundamental statistics in physical education & sports sciences.