Bachelor of Vocation – Healthcare Management

Undergraduate Curriculum Framework 2022(UGCF)

DISCIPLINE SPECIFIC ELECTIVE - DSE 3 : Basic Statistics

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
DSE-3 Basic Statistics	**4**	**3**	**1**	**0**	**NA**	**NA**

Learning Objectives:

To motivate students towards intrinsic interest in statistical thinking. To analyze and interpret data.

Learning Outcomes:

After completing this course, students should have developed a clear understanding of:

1. Basic concepts of Statistics.
2. Distinguish between different types of data.
3. Graphical methods of displaying data.
4. Measures of Locations and dispersion.
5. Concept of Bi-Variate Data.
6. Principle of Least Squares.
7. Introduction to the basics of Probability.

Syllabus

Unit 1 (8 Hours)

Concepts of a statistical population and sample, quantitative and qualitative data, discrete and continuous data. Presentation of data by tables and by diagrams, frequency distributions for discrete and continuous data, graphical representation of a frequency distribution by histogram and frequency polygon, and cumulative frequency distributions.

Unit 2 (15 Hours)

Measures of Central Tendency: Arithmetic mean, Median and Mode , Measures of Dispersion: Range, Quartile Deviation and Mean Deviation, Variance, Standard deviation, and Coefficient of variation.

Unit 3 (12 Hours)

Bi-variate data: Scatter diagram, the principle of least-squares, and fitting of straight lines, Correlation and regression, Karl Pearson coefficient of correlation, Lines of regression, Spearman's rank correlation coefficient.

Unit 4 (10 Hours)

Random experiment, sample space, event, Definition of Probability, mutually exclusive events, Conditional probability and independent events. Bayes' theorem(without proof) and its applications

Practical component (if any) –

N/A

Essential/recommended readings-

1. Das, M.N. and Giri, N.C. (1986) Design and Analysis of Experiments. Wiley Eastern.
2. Goon, A.M., Gupta, M.K. and Dasgupta, B. (2005). Fundamentals of Statistics , world press
3. Gupta, S. C., & Kapoor, V. K. (2014). Fundamentals of mathematical statistics (11th ed.). Sultan Chand & Sons.
4. Sharma, J. K. (2019). Business statistics (5th ed.). Pearson India.

Suggested Reading-

1. J.E Freund (2009), Mathematical Statistics with Applications, 7th Ed, Pearson Education
2. Gupta, S. P. (2017). Statistical methods (43rd ed.). Sultan Chand & Sons.

Note: **Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**