

**5th SEMESTER
SKILL ENHANCEMENT COURSE**

BI517S: BIOSTATISTICS

CREDITS: THEORY: 2, PRACTICAL: 2

THEORY (2 CREDITS)

Unit-I

Meaning of Statistics, Aims of Statistics, Classification and Tabulation of Data, Frequency Distribution and Frequency Table, Graphical Representation of Data (Histogram, Bar Chart, Pie Chart, Frequency Curve, etc), Measures of Central Tendency: Mean, Mode, Median; Measures of Dispersion: Range, Mean Deviation, Standard Deviation, Variance, Coefficient of Variation, Standard Error.

Unit-II:

Statistical Hypothesis, Null Hypothesis, Statistical Significance, Critical Region, Level of Significance, Power of a Test, Degrees of Freedom, *z-Test*, Student's *t-Test* (Paired and Unpaired), Chi Square Test, Principles of Experimental Designs - Replication, Randomization and Local Control, Analysis of Variance, Test of Significance, Critical— Difference, CRD (Completely Randomized Design), RBD (Randomized Block Design), Latin Square Design (LSD).

PRACTICAL: (2 CREDITS)

Practicals will consist of hands on training using excel, and related softwares

Unit-1

1. Tabulation of different types of data.
2. Graphical Representation of Data
3. Measurement of central tendencies, and SD.

Unit-ii

1. T-test (paired un paired)
2. Z-test
3. ANOVA
4. Chi-square test