

Main Topics

(Detailed Contents)

(Stat-122)

Introduction:

Basic Principle and Definitions of: Statistics— Probability--Population-Sample-Data- Variable- Collection of data.

Organization and Displaying data:

Frequency distribution table- Relative frequency distribution table- Percentile frequency distribution table- Cumulative frequency table.

Graphical Representations:

Histogram- Polygon- Curve- Cumulative frequency curve- Pie chart.

Measures of Central Tendency:

Introduction- Summation Symbol- Mean- Median- Mode –Weighted Mean.

Measures of Dispersion:

Range-Variance- Standard Deviation- Coefficient of Variation.

Correlation and Regression:

Scatter Diagrams and The Nature of Relationship Between Two random Variables. Coefficient of Linear Correlation for Pearson . Coefficient of Rank Correlation for Spearman . Regression Line.

Probability:

Principles of Probability - Random Experiment- Sample Space- Events- Algebra of Events- (union- intersection- complement-disjoint) – Probability: Definition, Axioms of probability- Conditional Probability- Independent Events.

Random Variables:

Definition of random variable- Discrete random variable- Probability distribution of discrete random variable- Expected value(Mean) of random variable- Variance of random variable with properties.

Important Distributions:

Binomial Distribution and Applications- Normal distribution and application.

Sampling Distributions:

Simple Random Sample- Distribution of Sample Means.

