

Department of Statistics

Course Outcome

Descriptive Statistics – I

- CO 1-Explain various phases in statistics
- CO 2- Illustrate of various types of data.
- CO 3-Describe and interpret various summary measures of central tendencies.
- CO 4-List all partition values, Quartiles, Deciles and Percentiles.
- CO 5-Categorize the measures of dispersion.
- CO 6-Apply moments to estimate the measures of skewness and kurtosis.
- CO 7-Describe various measures relating attributes.
- CO 8- Analyze data relating to attributes and to interpret the results.

DSC-8A Elementary Probability Theory

- CO 9- Distinguish between random and non-random experiments.
- CO 10- Summarize various type of events.
- CO 11- Compute the probabilities of various events using mathematical definition of probability.
- CO 12 – Develop various concept of axiomatic approach of probability of events.
- CO 13- Justify concept of independence of probability.
- CO 14-. Explain and compute conditional probability.
- CO 15-Demonstrate the concept of Bayes' Theorem.

DSC – 7B Descriptive Statistics – II

- CO 16 –Identify the bivariate data.
- CO 17- Use the concept of covariance.
- CO 18- Compute Karl Pearson correlation coefficient.
- CO 19-Interpret the results of Karl Pearson's coefficient of correlation.
- CO 20-Use Spearman's Rank correlation coefficient.
- CO 21- Explain concept of regression and use it for estimation purpose.
- CO 22-Classify various index numbers and its tests.

DSC -8B Discrete Probability Distributions

- CO 23-Distinguish the discrete variable with finite and countably infinite sample space.
- CO 24- Illustrate discrete variable with different examples.
- CO 25-Define probability mass function, cumulative distribution function and their properties.
- CO 26-Calculate median, mode for discrete distribution.
- CO 27-Summarize Expectation and its properties.
- CO 28-Explain One point, two point and Bernoulli distributions.
- CO 29- Apply Binomial and Hyper geometric distribution in computation of probabilities.
- CO 30-Use concept of bivariate distributions and computation of related probabilities.



Practical Paper-I

- CO 31 - Represent the statistical data diagrammatically and graphically.
- CO 32 - Compute various measures of central tendency.
- CO 33- Solve the measures of dispersion.
- CO 34- Calculate coefficient of skewness and kurtosis using raw moments and central moments.
- CO 35- Calculate correlation coefficients and regression coefficients.
- CO 36- Interpret Consistency, Association and Independence of Attributes.
- CO 37- Use MS-EXCEL for computation of measures of central tendency, dispersion and measures of skewness, kurtosis.
- CO 38- Illustrate applications of some standard discrete probability distributions.
- CO 39 - Compute the index numbers.

DSC-7C Probability Distributions-I

- CO 40- Categorize Poisson, Geometric and Negative binomial distributions.
- CO 41- Illustrate continuous random variable.
- CO 42- Summarize probability density function and cumulative distribution function and its properties.
- CO 43- Distinguish of r. v. and probabilities using its probability distribution.
- CO 44- Define moment generating function, cumulant generating function and its properties.
- CO 45- Find various measures of central tendency, Dispersion and skewness, kurtosis using probability density function.
- CO 46- Analyse bivariate continuous.
- CO 47- Use the concept of transformation of univariate and bivariate continuous random variable.

DSC-8C: Statistical Methods-I

- CO 48- Define the concept of Multiple Linear Correlation.
- CO 49- Describe the concept of Partial Correlation.
- CO 50- Apply Multiple regression plane for estimation.
- CO 51- Categorize properties of multiple and partial correlation coefficient.
- CO 52 - Describe census method, sampling method and advantages of sampling method.
- CO 53 - Construct samples using SRSWR and SRSWOR methods.
- CO 54 - Explain basic concepts of vital statistics.
- CO 55- Calculate measures mortality and fertility.

DSC-7D: Probability Distributions-II

- CO 56 - Define Uniform and Exponential probability distributions.
- CO 57- Calculate the mean, Variance, Moment generating function, moments, measures of skewness and kurtosis for Uniform and Exponential distributions.
- CO 58- Recognize Gamma and Beta distributions.
- CO 59- Compute various measures for Gamma and Beta distributions.



- CO 60-Describe Normal distribution with standard normal case.
CO 61-State the Chi-Square, t and F distributions.
CO 62- Calculate measures based on chi square, t and F distributions.
CO 63- State the interrelations between chi square, t and F distributions.

DSC-8D: Statistical Methods-II

- CO 64- Explain time series, components and utility of time series.
CO 65- Fit the various methods for measuring trend and seasonal variations
CO 66- Understand the meaning, purpose and use of Statistical Quality Control.
CO 67- Describe construction and working of control charts for variables and attributes.
CO 68- Explain Testing of hypothesis and its fundamental terms.
CO 69- Recognize various large sample tests for population mean, population proportion and correlation coefficient.
CO 70-Summerize small sample tests based on chi-square, t and F distributions.

Practical

- CO 71-Compute probabilities of standard probability distributions.
CO 72- Calculate the expected frequencies and test the goodness of fit.
CO 73- Obtain random sample from standard probability distribution and sketch of the p.m.f./ p.d.f. for given parameters.
CO 74-Fit plane of multiple regression and compute multiple and partial correlation Coefficients.
CO 75-Draw random samples by various sampling methods
CO 76-Construct various control charts.
CO 77- Use the applications of Poisson, Geometric and Negative Binomial Distributions.

