CY-510 APPLIED STATISTICS

Probability Distributions: Uniform, binomial, hyper geometric, poisson, normal, exponential, Chi-square, F & T distributions.

Sampling and Sampling Distribution: Introduction, sampling techniques, sampling distribution of mean, central limit theorem.

Statistical Inference & Hypothesis Testing: Confidence and significance level, sample size determination, point & interval estimates, interval estimates for population mean, population standard deviation, population proportion, type I, type II Errors, one Tail &two tail tests, tests concerning means, proportions & variances, Chi-square tests.

Regression and Correlation: Properties of least square, simple linear regression, nonlinear regression, multiple regression, estimates of regression parameters, confidence limits &test of significance, choice of a regression model, correlation, multiple and partial correlation, coefficient of determination, adequacy of the model.

Introduction to Experimental Design: Comparing mean test, ANOVA, tests for the equality of several variances, multiple range test.

Nonparametric Statistics: Nonparametric tests, signed-Rank test, Wilcoxon test, Kruskal-Wallis test, Rank correlation coefficient.

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