Code	Subject Title	Cr. Hrs	Semester
STAT-301	Parametric and Nonparametric Tests (Theory)	3	V
Year	Discipline		
3	Statistics-I,II,III		

Code	Subject Title	Cr. Hrs	Semester
STAT-302	Parametric and Nonparametric Tests (Lab)	1	V
Year	Discipline		
3	Statistics-I,II,III		

Parametric and Nonparametric Tests
Course Outline
1. Tests of hypothesis: parametric methods, Type I and Type II error, pointer of the test, Z-test, t-test, F-test.
2. Analysis of categorized data. Goodness of fit tests. Homogeneity of variance. Bartlett test and Cochran test. Contingency tables. Test of independence in contingency tables. Fisher's exact test for 2x2 contingency tables, Test for Homogenty.
3. Non-parametric methods. Chebyshev's inequality. The sign test. Wilcoxon's signed rank test. Mann-Whitney U test. Median test. Run test. Kolmogrorov-Smirnov test. Kruskal-Wallis test. Median test for k-samples. Friedman's test.
4. Sequential test. Test for proportion. Operating characteristic (OC) function. Average sample number (ASN) function. Test for standard deviation.

Books Recommended
1. Dixon, W.J., and Massey, F.J. "Introduction to Statistical Analysis" McGraw-Hill Company, New York, Fourth Edition, 1979.
2. Steel, R.G.D. and Torrie, J.H. "Introduction to Statistical Analysis" McGrow-Hill Book Company, New York, Second Edition, 1980.

Reference Books
1. Larson, H.J. "Introduction to Probability Theory and Statistical Inference" John Wiley and Sons, New York, Third Edition, 1982.
2. Wilcox, Rand R. "Fundamentals of modern Statistical methods", Springer N.Y. 2001.
3. Vaidyanathan, M. "Latest Statistical Methods", S. Chand and Company, New Delhi, 2001.
4. Aggarwal, Y.P. "Statistical Methods" Sterling publisher, New Delhi, 1998.