

Form (H)
Short course description

Course title: Nonparametric Statistical Methods	Course number and code: STAT 333
Previous course requirement: STAT 105	Language of the course: Arabic
Course level: 4 / Year 2	Effective hours: 3(2+2+0)

Course description

Concept of nonparametric statistics -Statistical tests based on the binomial distribution (binomial test and its varieties, confidence intervals - quantile tests -tolerance limits). Sign test and its varieties, McNemar test, Cox-Stuart test. Chi-squared test, 2×2 , $r \times c$, for homogeneity, and for independence. Median test, Friedman test, and Cochran test for related observations. Goodness of fit tests: Chi-squared test, and Kolmogorov-Smirnov test. Kruskal-Wallis test, Mann-Whitney-Wilcoxon test for two independent populations, and for the independence of two population variances. Siegel-Tukey test for the independence of two population variances, Wilcoxon signed rank test, Wilcoxon test for the difference of the mean or median from a known value m .

Course objectives

Development of some parts of the course to get the students acquainted to using statistical packages in nonparametric tests.
Using modern and diverse text books and references.
Updating the website of the course periodically.

Learning outcomes (understanding, knowledge, and intellectual and scientific skills)

After studying this course, the student is expected to be able to:

Concepts of nonparametric statistics. Nonparametric statistics, advantages and disadvantages. Types of measurements.
To know the nonparametric statistical methods and applications.
Demonstrate capability of choosing the appropriate statistical methods for a particular application from nonparametric tests.
Formulate significant research questions, use appropriate nonparametric statistical tests.
Analyze and interpret the results.

Textbook adopted and supporting references

Title of the book	Author's name	Publisher's name	Date of publication
Practical Nonparametric Statistics	W. J. Conover	John Wiley & Sons	1999
Nonparametric methods for quantitative analysis	Gibbons, Jean Dickinson	Holt, Rinehart and Winston	1976
Nonparametric statistics: a step-by-step approach	Gregory W. Corder, Dale I. Foreman	John Wiley & Sons	2014
Applied	Daniel, Wayne W.	Houghton Mifflin	1978

nonparametric statistics			
Nonparametric Statistical Methods	Myles Hollander, Douglas A. Wolfe, Eric Chicken	John Wiley & Sons	2014