

MODULE DESCRIPTOR

MODULE TITLE	NONPARAMETRIC STATISTICS		
MODULE CODE	MA2871 (L5)	CREDIT VALUE	10 CREDITS (5 ECTS)
CAMPUS	UCLAN CYPRUS		
SCHOOL	SCHOOL OF SCIENCE		

MODULE AIMS

This module explores the fundamental principles and methods of modern nonparametric statistics. Methods for a wide variety of applied problems will be explored and students should be able to compare these methods to the corresponding parametric procedures.

MODULE CONTENT

One Sample Methods: Parametric Methods, Binomial Test, Wilcoxon Signed Rank Test.

Two Sample Methods: Permutation Test, Wilcoxon Rank Test, Mann-Whitney Test, Kolmogorov-Smirnov Test.

K-sample Methods: Permutation F-test, Kruskal-Wallis Test.

Tests for Association: Pearson's Correlation Coefficient, Spearman Correlation Coefficient, Kendall's Correlation Coefficient.

Goodness of Fit Tests: Kolmogorov-Smirnov goodness of fit test, Chi-squared goodness of fit test.

Categorical Data: Contingency Tables, Chi-squared test for independence.

INTENDED LEARNING OUTCOMES

On successful completion of this module a student will be able to:	
1.	Describe the principles of the nonparametric methods that will be introduced, and apply these methods
2.	Compare nonparametric methods to their parametric counterparts
3.	Use the basic methods for analysing contingency tables

TEACHING METHODS

The class contact will consist of teaching classes together with workshops. Teaching classes will introduce new material and provide examples. Tutorials have no new material introduced. Students will attempt problems during the tutorials. Key elements of the learning strategy are regular sessions during which problems are attempted. Throughout the week students will be given a list of problems to attempt.

ASSESSMENT METHODS

The module is assessed through a written examination.