

MODULE DESCRIPTOR

MODULE TITLE	BIostatISTICS AND EPIDEMIOLOGY		
MODULE CODE	MA3876 (L6)	CREDIT VALUE	10 CREDITS/5ECTS
CAMPUS	UCLAN CYPRUS		
SCHOOL	SCHOOL OF SCIENCE		

MODULE AIMS

This module aims to introduce students to statistical methods for analyzing survival data derived from laboratory studies, clinical and epidemiologic studies of humans, and other appropriate applications.

MODULE CONTENT

Epidemiology

Basic Definitions, Observational Studies (Cohort study vs case-control study), Clinical trials, Prevalence vs Incidence, Rate of Mortality, Kappa statistics, Sensitivity and Specificity, ROC curves and the area under a ROC curve.

Measures of Association: Relative Risk vs Odds Ratio.

Chi-square, Fisher's exact, and McNemar's test.

Survival Analysis

Censored, Truncated Data, Survival Function, Risk Function, Parametric Survival Distributions, Kaplan-Meier Estimator, Comparison of Survival Curves: Mantel-Haenszel logrank test, Tests for k survival Curves.

Modeling Survival Data: Cox Proportional Hazards model

INTENDED LEARNING OUTCOMES

On successful completion of this module a student will be able to:	
1.	Apply the basic concepts related to epidemiology and survival analysis in real-life problems.
2.	Apply the correct statistical method to analyse survival data.

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.

Due to the theoretical nature of the material in this ten-credit module, the assessment will be by examination.

ASSESSMENT METHODS

The module is assessed through a Written Exam.